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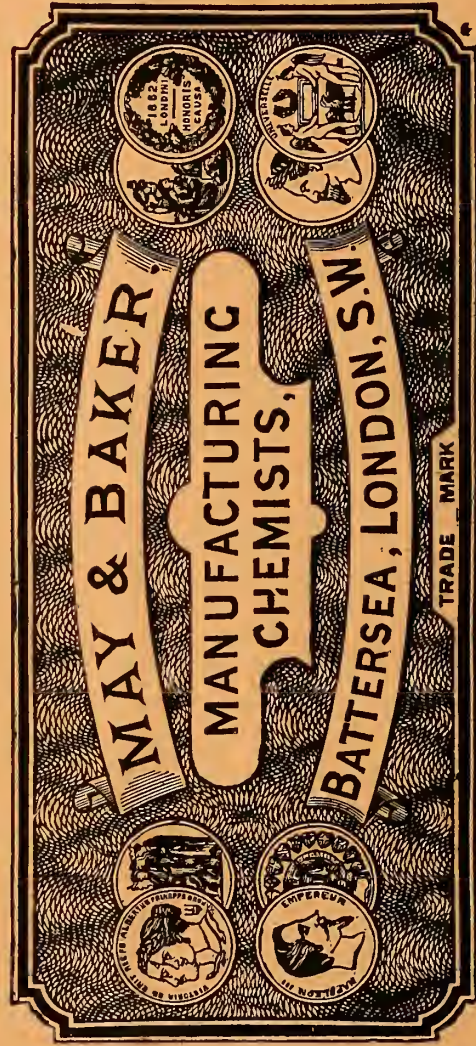
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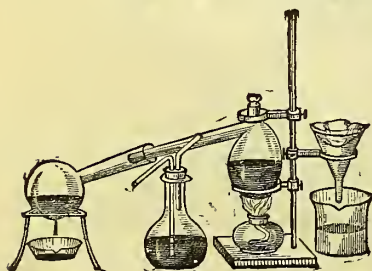
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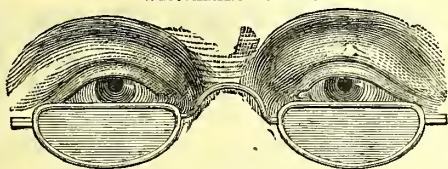
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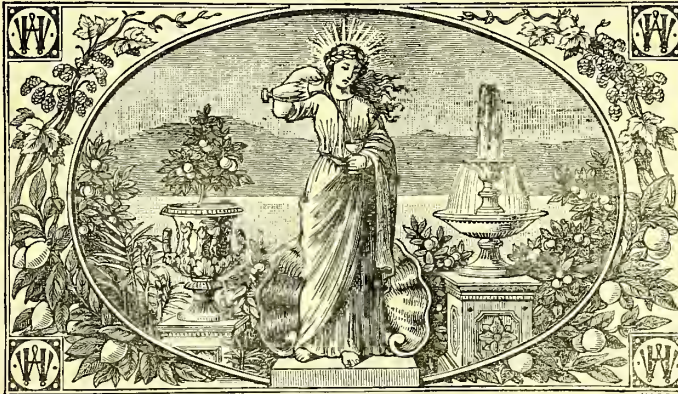
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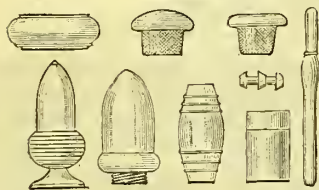
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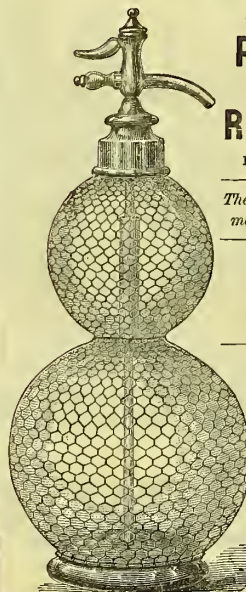
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"	1879	350	None
"	1880	430	None
"	1881	540	None
"	1882	615	3 $\frac{3}{4}$
"	1883	708	5
"	1884	908	6
"	1885	1,193	6
"	1886	1,463	6

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	£	s.	d.
1879	Loss	260	13 8
1880	Profit	275	0 1
1881	"	729	5 3
1882	"	904	18 0
1883	"	1,307	2 10
1884	"	1,919	0 4
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BEWARE OF OTHERS USING the same
words in order to deceive.
BEWARE OF ALL IMITATIONS.

MASON'S IS A SPECIAL COMPOUND,
AND THE ORIGINAL PREPARATION.

ALL OTHERS ARE Substitutes.

Sold in Bottles, 6d., 1s., 2s., 5s., and 20s. each.

Is not Affected by Climate or Weather.

Prices, Circulars, Show Cards, &c., on application.

JEWSBURY & BROWN'S (MANCHESTER) SPARKLING TABLE WATERS, UNRIVALLED FOR PURITY AND QUALITY.

SODA WATER.
SELTZER WATER.
POTASH WATER.
LITHIA WATER.
SIMPLE
AERATED WATER.



LEMONADE.
GINGER ALE.
QUININE TONIC.
GINGER BEER.
HOREHOUND BEER.

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."

"On the whole, I have no hesitation in stating that your Aërated Waters are of the highest standard of purity which is practically attainable."

LOUIS SIEBOLD, F.I.C., F.C.S.

"The Lemonade is, for flavour and general excellence, superior to any similar compound which I have examined, and contains no acid but Citric Acid."

"I took a sample of the water used in your manufactory, in the preparation of the Aërated Waters, and found it, as was the case with the completed compounds, entirely free from lead, copper, or any injurious matter whatever."

C. ESTOVRT, F.C.S., F.C.I.

J. & B.'s Syphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination

113 MARKET STREET, and 44 DOWNING STREET, MANCHESTER.

NON-INTOXICATING BEVERAGES. EASILY AND QUICKLY MADE.

POTTER'S HERB BEER EXTRACT

For the production of a splendid Botanic Beer, with a good colour, flavour, and body, and a creamy head like bottled ale. The demand for this article last year was exceedingly large, and the demand this year bids fair to be still larger. All Chemists will find it a profitable article of sale.

Price, 1/3 per lb. Special quotations for quantity. In 6d. Bottles, 3/6 per dozen.

Supplies of printed matter sent with all 6d. Bottles.

POTTER'S CONCENTRATED BOTANIC PORTER

For making Botanic Porter or Stout. It gives a sweet, palatable taste, good body, and a creamy head like bottled stout, and is likely to become a very popular beverage.

Price, 1/3 per lb. Special quotations for quantity. 6d. Bottles (to make 5 gallons), 3/6 per dozen.

We are prepared to supply 6d. Bottles of both of the above, with our customer's name on both labels and handbills.

THEY WILL KEEP GOOD IN ANY CLIMATE.



Registered Trade Mark

POTTER & CLARKE,

Wholesale and Export Botanic Druggists,

75 Weston Street, LONDON, S.E.

Indian Agents—Messrs. LAWSON & CO., BOMBAY.

Price Lists on application. Telegraphic Address—"HOREHOUND LONDON."

PRIZE MEDA



HEALTH
EXHIBITION.

BATHING CAPS.
CIRCULAR SHAPE. Well-assorted Patterns.
PER DOZEN, 9/-
NORMANDY SHAPE. Assorted Patterns.
PER DOZEN, 12/-

WASHING GLOVES
Each dozen in a Glass Top Show Box.
SIX PATTERNS.
PER DOZEN, 6/6.

We do not pay
Carriage on goods, but allow
10 per cent. for prompt cash.

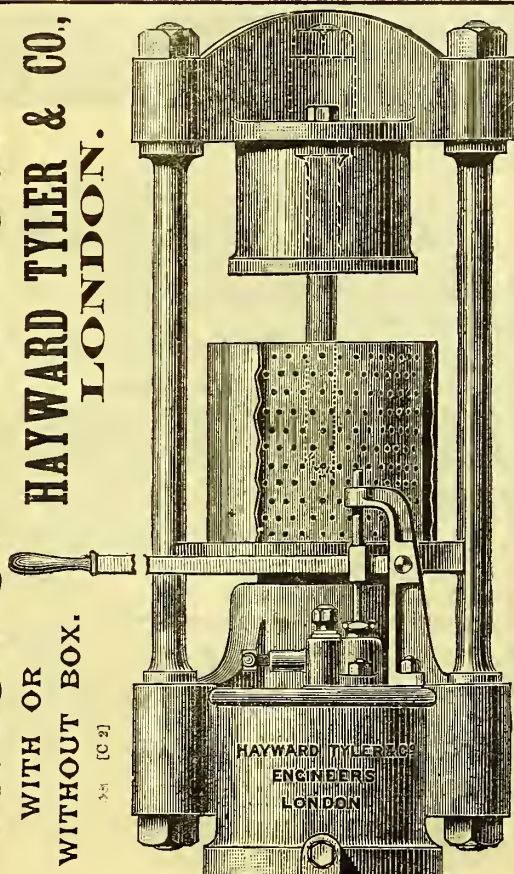
A fully Illustrated Catalogue sent post free on application.

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34 & 35 FURNIVAL STREET,
LONDON,
E.C.

SPONGE BAGS.
No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
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TRUSSES.
GOOD QUALITY.
Single, 12/6; Double, 23/-
Not less than 1 dozen supplied at these prices.

TINCTURE PRESSES.
WITH OR
WITHOUT BOX.
HAYWARD TYLER & CO.,
LONDON.



IMMENSE SUMMER SALE

TO THE TRADE, IN BULK,
1/- lb., 10/- Gallon.

Special Quotations
for large
Buyers.

EXTRACT OF HERBS
Labels
provided
if necessary.

PREPARED BY

W. GEDDES,

MANUFACTURER OF

Pharmaceutical Preparations,
WERNETH, OLDHAM.

"ABSOLUTELY PURE."



REGISTERED.

**ELLIS'S
RUTHIN
WATERS.**

ESTABLISHED 1825.

Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale.
For Gout: Lithia Water, and Lithia and Potass Water.

ASK FOR ELLIS'S.

SOLD EVERYWHERE.

**SOLE ADDRESS—R. ELLIS & SON, RUTHIN,
NORTH WALES.**

London Agents: W. BEST & SONS, Henrietta Street, Cavendish Square.



TRADE MARK.

MASON'S ESSENCE OF BEEF.

**CONCENTRATED BEEF TEA.
MEAT LOZENGES, &c.**

The Trade would study their interests by introducing our preparations to their customers, for the reason that they are not only the best made, but at the same time the cheapest, and bear a larger margin of profit. A small trial order will prove the truth of the above statement.

Proprietors of the Delicious

"O. K." SAUCE.

GEORGE MASON & CO., LD., 417 KING'S ROAD, CHELSEA, LONDON, S.W.

PURE WATER.

IMPORTANT TO CHEMISTS, &c.

BRACHER'S

Automatic Distilling Apparatus



Should be in every Pharmacy.
It is Simple, Satisfactory, and Cheap.

Amongst many advantages possessed by these Stills, it may be mentioned that each apparatus being complete in itself, requires but little attention when working; the space occupied is considerably less than is usually the case; it is very ornamental, and easily cleaned. [2]

MANUFACTURED BY

BRACHER & CO.,

Inventors and Patentees, West Hill, WINCANTON.

CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

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INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.—

AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England.

12½ gals. for £1, Cash free.

SPECIAL LINES FOR CASH BUYERS.

TYRER'S
WORCESTER SAUCE,
YORKSHIRE SAUCE,
"BOROUGH" KETCHUP.
BEST VALUE THAT MONEY CAN PURCHASE.

Prices and Samples sent free of all cost by

PETER TYRER, The "Borough" Ketchup & Sauce Maker,
LONDON, S.E.

Established over 40 Years. **WM. BUSH, SON & CO.** MANUFACTURING CHEMISTS, York Street, Walworth, LONDON, S.E. Telegraphic Address: "Bushworth London."

SPECIAL TERMS FOR LARGE PARCELS.
Acid Citric. Tartaric. Mineral Acids. Ammon. Carb. Liquid. Colour Extracts (for confectionery) Capsicine. Carmine. Chloroform. Cream of Tartar. Essences (Fruit), Concentrated. Soluble. Ether Sulphuric. Nitric (Spirit), B.P. 850°, 880°, and 900° s.g. Gingerine. Glucose. Granular Effervescing Preparations. Essential Oils (finest Lemon. Peppermint, &c., &c.) Saffron Valencia. Sal-volatile, B.P. and P.L. Scale Preparations, &c., &c.

Samples and Prices on application.

SOLE PROPRIETORS OF

MARIGOLDINE,

A new Preparation for Colouring Butter, Cheese, &c.

We would respectfully request our Friends to Address us in Full, to avoid mistakes and delay.

"laden with the scent of flowers,
And breath of odorous Spring."

SPINNER'S TEAS.

A company of Merchants are now selling through SPINNER & CO. the choicest Teas that come from India and China at 2/8, 2/4, 2/, and 1/8 a pound, in packets only. These are the perfection of Teas, and will please the most fastidious.—Agents wanted in every town and village. For Terms apply to SPINNER & CO., 60 Strand, London.

SPINNER & CO., London and Liverpool.

TEA from China, India, Ceylon, Java, &c., also every variety or grade of **COFFEE**
PEARSE & WHEATLEY, 42 MINCEING LANE, LONDON, E.C.

(Telegraphic Address—PACIFICUS LONDON.)

SPECIAL BLENDS OF TEA—

(Duty-paid prices quoted.)

In Boxes, 20 lbs. or 40 lbs.; ½-Chests, 60 lbs.; or Chests, 100 lbs. 60 lbs. carriage paid to any Station in England or Wales. Terms—Net Cash with order.

CEYLON TEAS (PURE)—

IN LEAD PACKAGES (¼ lb., ½ lb., or 1-lb.)

Most attractively labelled.

No. 1.	No. 2.	No. 2a.	No. 3.	No. 3a.	No. 4.	No. 4a.	No. 5.	No. 6.	X.
1/	1/2	1/3	1/4	1 5	1 6	1 7½	1 9	2/	2 4

Duty-paid prices.

(For Export under Bond, 6d. per lb. less.)

FINE COFFEES (Roasted)—

1/	1 1	1 2	1 3	1 4	Choicest Mocha or Mysore, 1 5
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In 28-lb., 56-lb., or 112-lb. Bags; also supplied Raw or Ground. Cash, less 2½ per cent. discount.

THE NEW FRENCH COFFEE—CAFÉ FRANÇAIS

to sell at 10d., 1/4, and 1/6, in ¼-lb., ½-lb., and 1-lb. Canisters. Most carefully labelled without any firm's name appearing.

Export Department.—Teas or Coffees in Bond. Shipped to any part of the world. Terms, f.o.b. London against banker's credit or remittance.

Samples, Price Current, and every information on application with pleasure.

FEEDING BOTTLES



SPECIAL PARCELS



UNSOLICITED TESTIMONIALS.

2 and 3 Orford Hill, Norwich, May 25th, 1887.

GENTLEMEN,—We have received the Guinea Case of Feeders and consider them first-class, and quite equal to any make at about double the price. We are also well satisfied with your Dispensing Bottles and Vials, which are cheap, good, and accurate. We wish you every success.

Yours faithfully,

JAMES ROBINSON & Co.

For the benefit of the trade you may publish the facts regarding your goods.—J. R. & Co.

1 Middleton Road, Dalston.

GENTLEMEN,—Please repeat my order for Nos. 3 and 5 Screw Stopped Feeding Bottles. I am glad to inform you that they have sold better and given greater satisfaction both to the purchaser and myself than any feeders I have ever had during my quarter of a century's experience as a vendor, and I am of opinion that they take the first place in the market both for efficiency and lowness of price.

Yours truly,

B. J. WILKINSON.

We have a very large number of unsolicited Testimonials in addition to above, which may be inspected at our Offices at any time.

E. A. HEARN & CO.

Beg to inform the Trade that in consequence of the Great Demand for their

NEW IMPROVED PATENT FEEDERS,

And the pleasing Testimonials received daily from many well-known Firms who have bought these Goods, they have determined to send out a limited number of

ONE GUINEA ASSORTED PARCELS

EACH CONTAINING AS UNDER:—

One dozen of their No. 1 Green Glass, White Fittings.

*Three " " No. 3 White " Black "

*One " " No. 5 " " "

* These are fitted with our "Improved Patent Glass Screw Stoppers."

(Extra Quality, in handsome Cardboard Boxes.)

E. A. H. & Co. have decided upon doing this in order that all the Trade who have not already given them a trial may see for themselves the EXCELLENT VALUE of their goods.

If in any case a Parcel should not give the purchaser ENTIRE SATISFACTION, the Goods may be returned and the money will be refunded in full.

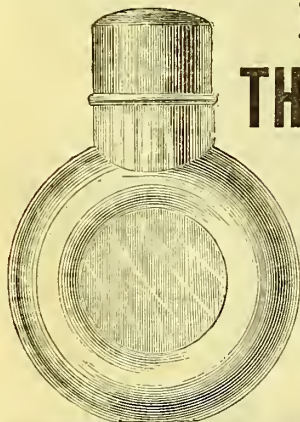
If preferred, the cash may be placed in the hands of any of the London Wholesale Houses, who may be instructed to remit to us only upon the goods being APPROVED OF.

CHEMISTS and others dealing in this line of goods CAN, and WILL,

greatly increase their trade by selling these well-known Bottles, as they are acknowledged by all who have tried them to be the MOST SALEABLE and the BEST VALUE in the Market.

Cash must in all cases accompany orders for these Special Parcels, either direct to us or to a London Wholesale House, as stated above.

We Guarantee these Goods to be of FIRST-CLASS QUALITY only. WE INTEND TO MAINTAIN OUR REPUTATION FOR VERY BEST GOODS, and will not send out inferior qualities.



EXTRAORDINARY CHEAP LINE. THE WATCH SMELLING-SALT BOTTLE.

These Bottles are fitted with BEST SCREW NICKEL CAPS, lined with Washers, and are the most wonderful value ever offered. A trial order will prove this fact.

PRICE, IN BEST WHITE FLINT OR ASSORTED COLOURS, **12/ per gross.**

Orders may be sent through any of the Wholesale Houses, or direct to

E. A. HEARN & CO., Manufacturers of Glass Bottles of every description,

381-3 KINGSLAND ROAD, LONDON, E.

The annexed Illustration shows exact size of above-mentioned Bottle.

GIVE US A TRIAL, and your future Trade will be secured.

E. A. HEARN & CO., Manufacturers of Glass Bottles of every Description, **381-3 KINGSLAND RD., LONDON, E.**

N.B.—If at any time orders for our Goods should be sent through any of the Wholesale Druggists or Drug Sundry Houses, please be particular in **DISTINCTLY STATING** that the make of E. A. HEARN & Co. is required, or otherwise disappointment will ensue.

Telephone Number, **Advertisers' & Buyers' Reference List,** TELEGRAPHIC ADDRESS—
1852. **AND INDEX TO ADVERTISEMENTS.** **CHEMISTS**
LONDON.

ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and NOT at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

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AI MENTHOL CONES (Shirley, J. G.)	30	DAY, SON & HEWITT	Cattle Medicine Chests	35	MAY & BAKER	Sublimed Camphor Tablets
AIRE & CALDER BOTTLE CO.		DAY & SONS	Horse and Cattle Medicines	34	COVER	
Disinfecting Bottle, &c.	25	DE PASS, E.D., & CO.	Petrolina	32	MAY, ROBERTS & CO.	Water Bath
ALLEN & HANBURY'S		DUNLOP, MITCHELL & CO.	Filters	9	MEADOWCROFT, W., Sol. Ess. Jamaica Ginger	9
Effervescent Saline, Wholesale Druggists,	COVER	DURRANT & CO.	Perfumes	40	MILLS, R. M., & Co.,	Flavour Aerated Waters
APOLLINARIS CO.		EDGELL BROS.	Pure Rectified Spirits	40	MISCELLANEOUS ADVERTISERS	
Apollinaris Water 23, Hunyadi Janos		ELLIS, R., & SON	Ruthin Aerated Waters	12	Colour Supplement	
APOLLINARIS CO., Friedrichshall Water TEXT	716	ELVIN BROTHERS	Fluid Sheep Dip	40	MORPHY, EUGENE	Walnut Pomade
ASSISTANTS WANTED	Coloured Supplement	EVANS, SONS & CO.	Loca Wine	34	NEWBALL & MASON	Non-Intoxicating Beer
ASSISTANTS WANTING SITUATIONS		EVANS, LESCIEUR & WEBB	"	34	NOAKES, B., & CO.	"
ATKINSON, J., & CO.	Perfumery	EVANS, SONS & MASON (Montreal)	"	34	Metallic Casks, Drums, Kegs, &c.	36
AUSTIN & CO.		EXCHANGE COLUMN	Coloured Supplement		OAKLEY, J., & SONS	Emery Cloth & Knife Polish
Cardboard Boxes, Perfume Sprinklers, &c.	36	FAVARGER, H.	New Rapid Siphon Filler	8	ORME, J., & CO.	Scientific Apparatus
AYER, H. W.,	Recamier Preparations	FELTUE & SONS	Lime Juice	40	ORRIDGE & CO.	Transfer Agents Coloured Suppt.
AYRTON & SAUNDERS	Boxes	FENNING, ALFRED	Children's Powders,	COVER	PEARSE & WHEATLEY	Teas and Coffee
		FINK & CO.	Glycerine Gum, &c.	40	PETERSON & CO.	Sponge
		FORD, SHAPLAND & CO.			PHILLIPS, GEORGE, & CO.	Pure Spirits of Wine
					POTHS, H., & CO.	Shop Bottles and Jars
					POTTER & CLARKE	
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					RAIT, GEO. L.	Analytical Chemist
					RAPHAEL, J., & CO.	Specimens, &c.
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					ROBBINS & CO.	Methylene
					SANFORD & SON	"Found Dead"
					SANITAS, THE CO., LIM.	Disinfectant, TEXT
					SAUNDERS, J. W.	Private Tutor
					SCHOOL OF PHARMACY, THE	
					SHIRLEY, A. W.	BLOOMSBURY
					SILICATED CARBON FILTER CO.	Filters
					SMITH, T. & H., & CO.	Albin
					SMITH, T. J.	Cod Liver Oil
					SPINNER & CO.	Spinner's Teas
					SPRATTS' PATENT	Drug Biscuits & Medicines
					STEVENSON & TRAVIS	Antiseptic Dressing
					STEVENS, P. A.	Gutta Serena Enamel
					STEVENSON & HOWELL	
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					O'Neill's Moma Bouquet	
					Coloured Supplement	
					WYLEYS & CO.	Gelatine Coated Oval Pills
					YEATMAN, F. J.	Syr. Hippophosph. Comp.
					YOUNG, HENRY	Corn and Bunia Plasters

CLASSIFIED LIST OF ALL ADVERTISERS

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

AERATED AND		DITTO PLANT		AGENCIES		BLACKING	
MINERAL WTS		[See SYPHONS and ESSENCES.]		ABROAD		New Military Blacking Com- pany Jamieson and Co.	
Aesulap		Barnett and Foster		Cocking (Japan)		BOTANIC BEER	
Apollinaris (Hunyadi, Fried- richshall, and Apollinaris)		Brady and Hinchliffe		Drysdale, J. W., and Co.		BOTTLE CAPS	
Barnett and Foster		Bish, W. J., and Co. (Foam Producer, &c.)		Eisner and Mendelson (Phila- delphia)		Newball and Masov	
Bromley and Co. (Woodhead Spa)		Dunfort, M.		Evans, Sons and Mason (Canada)		BOTTLES	
Carter, H. W., & Co. (Ginger Ale Essence)		Guert Frères		Felton (Melbourne)		Aire and Calder Bottle Co.	
Chemists' Aerated Waters		Meadowcroft, W.		Fougers (New York)		Barnett and Foster	
Association		Tyler, Hayward, and Co.		Hormusjee Ruttonjee (Bombay)		Brady and Hinchliffe	
Durrant, Geo. & Co.		ACETIC ACID		Kempthorne (New Zealand)		Breth's (Lim.)	
Ellis (Ruthin)		Dunn and Co.		MacNaughtan (New York)		Brooks, Peck, Perfumers	
Hassall and Co. (Citric Acid, Phospho)		Hirst, Brooke and Hirst		MacRobert (New York)		Glusgo & Apothecaries' Co.	
Hay, W. (Hop Ale Essence)		Morris and Callard (Salts)		Prosser, E., and Co. (Sdn)		Harris, F. A., and Co.	
Hunyadi Janos		ALKALOIDS		Rocke (Melbourne)		Jassies and Co.	
Ingram and Royle (Mineral and Vichy, Sauerbrunnen, Carlsbad)		Howards and Sons (Cinchona)		Sharland & Co. (Auckland N.Z.)		Kilner Bros	
Jewbury and Brown		Smith, T. and H.		Stallman and Fulton		Lang, Jones and Jules	
Kinmond and Co.		AMMONIA		Symes and Co. (Sima)		Lynch and Co. ("L" Brand)	
Meadowcroft, W.		May and Baker		APPARATUS		Morrison, R., and Co.	
Mills and Co. (Bonne)		ANALYSIS		Bracher & Co. (Automatic distilling)		Potts	
Taylor, T. and F. J.		Rait, G.L., F.R.C.S., &c.		Maud, W. R.		(Feeding)	
Williamson, W.H. (Wnter Drunk)				May, Roberts (Water-bath)		Toogood	
[See GINGER ALE.]				Orme (Scientific)			

BOXES

Austin and Co. (Cardboard)
Ayrton and Saunders (Willow)
Irvin and Sellers
Metz, Paul (Pine and Willow)
Robinson and Sons (Pill and Insect Powder)

BROMIDIA

Battle and Co.

BRUSHES

Dukas and Co.
Goodall, H. A., and Co. ("Standards")

BUTTER COLOUR, &c.

Bush, W., and Son (Margarine)
Tomlinson and Hayward

CAMPOR

Howards and Sons
Keene and Ashwell (Homoeopathic)
May and Baker
Murray, Sir James (Fluid)

CAPSULES

Betts and Co. (Metallic)
Denoual, J. (Medicinal)
Duncan, Flockhart and Co. (Cascara Sagrada)
Hooper, B., and Co.
Maw, Son and Thompson
Melin, C. (Capsuling Machine)
Metz ("Acme" Brand)

CARMINE

Bush, W. J., and Co. Sellers

CASTOR OIL

Allen and Hanburys

CATALOGUE

Evans, Sons and Co. (Price Current)
Maw, S., Son and Thompson (Price Current)
Newbery and Sons

CEMENT

Foulkes
Kay (Coaguline)
Winklemore and Co. (Liquid Glue)

CHALK PRECIP.

Dunn and Co.
Levermore, Aug. and Co.

CHEMICALS

Bernstein Vogt (Fine)
Brumwell, E., and Son
Bush, W., and Co.
Dunn and Co.
Fletcher, Fletcher & Stevenson
Gaskell, Deacon and Co. (Bicarbonate of Soda)
Howards and Sons (Pharmaceutical)
Lindsey, C. R., and Co.
May and Baker
Morris, Callard, and Co.
Petri Bros.
Sumner, R., and Co.
Smith, T. and H.
Tyke and King
Walker, Troke and Co.
Wink, J. A., and Co. (Fine)
Zimmermann, A. and M.

CELORATE OF**POTASH**

(Compressed Tablets)
Burroughs, Wellcome and Co.
Hooper, B., and Co.

CHLORODYNE

Blyton-Bage and Co. (Twemlow's)
Davenport (Browne's)
Towie, A. P.

CHLOROFORM, &c.

Duncan, Flockhart
Macfarlan, J. F.
Petri Bros.
Smith, T. and H.
Wink, J. A., and Co., Ltd.
Zimmermann

CITRIC ACID

Hasall's (Phospho)

COCAINE**HYDROCHLOR.**

Howards and Sons

COCOA & CHOCOLATE

Cadbury
Fry (Malted)
Savory and Moore (Cocoa and Milk)

COD-LIVER OIL

Allen and Hanburys
Burroughs, Wellcome
Burgoyne (Peptelaine)
Hertz & Collingwood
Lodden Cod Liver Oil Co.
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Southall Bros. and Barclay
Woolley, Sons and Co.

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COIN TILLS

Sherwin (Checker)
The Eclipse Patent Check Till Co.

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Leo's Tablets
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Young's

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Sanger, J., and Sons

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Newbery and Sons
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National Chemical Co.
Sanitas
Steele & Co. (Chloride of Lime)
The American and Continental
Sanitas Co. (Lim.)

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Evans, Lecher and Webb (Hawley's Counter Adjuncts)
Evans, Sons (Savars)
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Marriott and Co. ("Lily" Baby Comforter)
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Maw, S., Son and Thompson
May, Roberts and Co.
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Pattison, Geo.
Sanger and Sons
Savars
Schutze and Co.
Thompson, Millard
Toogood

DRUMS, CANS, &c.

Noakes and Co.

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Jamieson and Co.
New Military Blacking Co.

DYES

Ayrton and Saunders

EAU DE COLOGNE

Farina, J. M. (Gegenüber)
Mason, H. C. (Nun)

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Orme and Co.
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Barker, W., and Son

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Carter, H. W., and Co.
Hay's Soluble Lemon, &c.
May and Baker
Meadowcroft, W.
Stevenson and Howell
Tyke and King
Vogt, G.
Woolley, Sons and Co.

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Bush, W. J. (Lemons, &c.)
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Hay, W.
Lambert, S. and Co.
May and Baker
Meadowcroft, W.
Rocke, Tompsett (Encalyptus)
Sumner and Co.
Sullivan and Fulton
Stevenson and Howell
Sykes (O. Lavender)
Vogt, G.
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Wright, Layman and Umney

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Howards and Son
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Robbins

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Foulkes

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Chubb, J., and Co. (Violet)
Foulkes

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Maw, Son and Thompson
May Roberts and Co.
Savars
Thompson, Millard
Toogood, W.

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Mawson Swan, and Weddell
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Savory and Moore
Southall Bros. and Barclay
Sumner, R., and Co. (Angels)
Van Abbott (Diabetic)

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FULLER'S EARTH

Chubb, J., and Co.

GINGER ALE

Harston and Co.
Hay, W.

Meadowcroft, W. (Essence of)
Mills, R. M.
Sumner, R., and Co. (Essence)

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Fink
Martindale, W. (Nitro-Glycerine Tablets)
Price's Candie Co.

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Bishop, A.
Bush, W., and Co.
Evans, Sons
Wright, Layman and Umney

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Fink (Arabic, &c.)

GUTTAPERCHA

Duncan, Flockhart
Stevens, F. A. (White)

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Bewley and Draper
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Sandford
Steiner and Co.
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Tyrer, P.

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Burroughs, Wellcome and Co.

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Ewen, J.

LEECHES

Fitch and Nottingham
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LINSEED

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Mumford

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Randall and Son
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Sherwin
Werner and Pfeiderer

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Dinniford (Fluid)
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Murray, Sir James (Lim.)

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Drysdales and Co. (Dry)
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Day and Sons

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Cocking and Co.
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Hockin Wilson and Co.
Maw, Son and Thompson
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Shirley
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Robbins, J., and Co.

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Sherwin, G. E.
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Smith, T. and H.
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Munday, J. (Injection Day)

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Milk)
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Burgoyne, Burdidge
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Evans, Sons and Co.
Fellows (Hypophosphites)
Fletcher (Lqrs. for Syrups)
Hearon, Squire and Francis
Hewlett and Sons
Hirst, Brooke and Hirst
Hooper, B., and Co.
Howards and Sons
Key Bros.
Keith (Conc. Tinctures)
Martindale (Nitroglycerine)
Sellers, J.
Southall Bros.
Sumner, R., & Co.
Symes and Co.
Walker, Troke
Wink, J. A., and Co.
Woolley, Sons
Wyleys (Various)

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Perken, Son and Rayment**PILL MACHINES**

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Pinder, J. W.
Robertson, J. and Co. (Coating)

PILLS (Coated, &c.)

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felina)
Beecham, Thomas
Hooper, Dr.
McKesson and Robline Ovoid-
capsuled)
Morrison
Newbery
Sanger, J. and Sons
Smith, W. F.
Towle (for Females)
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Wyleys and Co.

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Cresswell, R., and Co.
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Evans, Sons and Co.
Evans, Son and Mason
Hearon, Squire and Franc e
Hewlett and Son
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FOR
FISH, GAME, STEAKS,
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In use for now nearly
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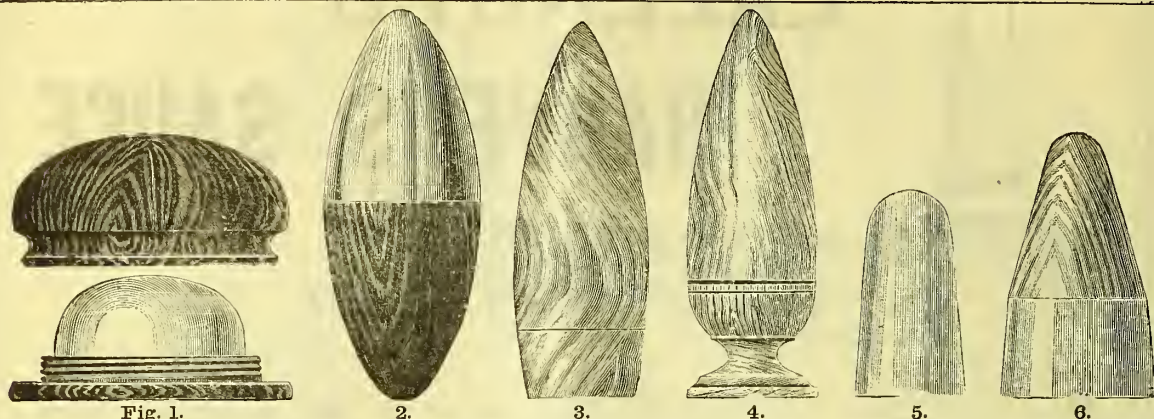


Fig. 1.	MAW'S MENTHOL,	in Ebony Cases, flat for the pocket	Per doz.	6/
	"	in Boxwood Cases	"	4/
	"	in Vegetable Ivory Cases	...	...	...	...	"	6/
Fig. 2.	MAW'S MENTHOL,	portable, with Screw Metal Caps	...	...	...	...	"	5/
Fig. 3 & 4.	MAW'S MENTHOL,	in Boxwood Cases	...	...	...	...	"	2/8 and 4/
	"	in Vegetable Ivory Cases	...	...	...	...	"	4/ and 6/
Fig. 5.	MAW'S MENTHOL,	in White Opaque Glass Jars with Red Celluloid Caps	"	2/6 and 3/6
Fig. 6.	MAW'S MENTHOL,	in Stopped Bottles	"	4/6 and 6/
	"	on Wood, in Glass Bottles	"	4/

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A perfectly white and delicately clean preparation, prepared from Salts obtained from the Pure Fruit Juices of Lemons and Grapes. The best Chemists in Great Britain and the Colonies kept no other "Granular Effervescent Citrate of Magnesia" than "Bishop's."

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(Signed)

JOHN ATTFIELD.

London, December 6, 1881.

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Lanoline has been used as a basis for ointments in scrofuloderma, pruritus, erythema, sycosis, tinea versicolor, epithelioma, lupus and common ulcers, eczema on all parts of the body, and dermatitis, etc.

The most satisfactory results are recorded of it with chrysarobin in psoriasis (Lassar), tinea favosa of eight years' duration (Wende), herpes tonsurans, and pityriasis versicolor. With salicylic acid it has worked well in eczema. An ointment of it containing mercury produces no irritation, and its unprecedented usefulness on this account is obvious. "It is preventive of the formation of crusts" (Frankel), lessens the secretion of pus, and is employed extensively by surgeons and gynecologists instead of vaseline, &c.

PEPTONISED MILK IN CHRONIC DYSENTERY.

From his experience with chronic dysentery at the Dreadnought Hospital, Dr. Harry Leach concluded that drugs were of no avail in this affection, and that perfect rest and an assimilable nutritious diet could alone effect a cure. The milk diet, as introduced by a distinguished writer on the diseases of India, has been modified somewhat by peptonising the milk (to remove the dangers of curds), and the results obtained have been truly brilliant in those cases where recumbency was maintained, and this line of treatment persistently and faithfully carried out. In the beginning, the milk should be kept warm for at least forty minutes after a Peptonising Powder (Fairchild) has been added to it. Further advantages are afforded with Zymine, for as the weeks go by beef-tea and other foods may be peptonised with it. Dysentery has been cured with peptonised foods.

TEREBENE IN CHRONIC BRONCHITIS.

The inestimable benefits conferred by Pure Terebene (Burroughs), in chronic bronchitis, are widely known. The evil effects complained of by some who have tried Terebene may be largely explained by letters like the following:—

"SOUTH DEVON AND EAST CORNWALL HOSPITAL,
"March 15th, 1887.

"DEAR SIRS,

"... The Pure Terebene (Burroughs) we have used in a bad case of bronchitic asthma with the best results. No irritation of the throat, as one finds with crude preparations—in fact the patient could not take the so-called 'Pure Terebene' *other than yours*. . . .

"Yours truly,

"R. M. LUCY, *House Surgeon*.

"To MESSRS. BURROUGHS, WELLCOME & Co."

CASCARA "TABLOIDS" IN CONSTIPATION.

The poisonous effects of long retaining the excreta in the body, and, on the other hand, the deleterious action resulting from the continued use of active cathartics, have occasioned perplexity as to the most efficient mode of correcting constipation. The most popular agent for this complaint is Cascara Sagrada, the most convenient form of which is the Tabloids; these are made with chocolate, are pleasant to take, and differ from pills in that they are easy to swallow. They are soluble and efficient. It should be added, that the difference with which Cascara affects different people is sometimes considerable, a very large dose being occasionally required. The usual dose of the Cascara Sagrada Tabloids is one or two at bedtime, or one after each meal. As they can be carried in the pocket by the patient, they are admirably suited for continuous gentle medication.

AMMONIUM FUMES IN CHRONIC CATARRH.

The Burroughs Chloride of Ammonia Inhaler is of simple construction, easy to manipulate, affords neutral fumes, and is ever ready for use; the results obtained with it in catarrhal affections of the nares, Eustachian tubes, middle ear, throat and lungs, have been in the fullest sense satisfactory. Deafness of long standing, due to an extension of the catarrhal condition of the mucous membrane of the throat, has been effectually treated by Chloride of Ammonium fumes.

BURROUGHS, WELLCOME & CO., Manufacturing Chemists, Snow Hill Buildings, E.C.

CAUTION!

The word "VASELINE" is the Exclusive Property of the CHESEBROUGH MANUFACTURING COMPANY. It is registered as their TRADE MARK for their Emollient, Remedial, and other preparations of Petroleum, and cannot be employed with respect to any goods not manufactured by the Company.

ADDRESS—41 HOLBORN VIADUCT, LONDON, E.C.

LANOLINE PREPARATIONS.

Lanoline.

Lanoline is the fat natural to the hair and skin. It is absorbed by these at once. It is the best basis known for ointments, salves, &c. Of desirable consistence, it does not melt below body heat, and does not "run" like ordinary ointments. Being homogeneous, and devoid of hard crystalline bodies and free fatty acids, it is soothing and acceptable in the most irritable conditions of the skin. It is miscible with water and all medicinal ingredients indifferently, is preservable, slightly tenacious and adhesive, and perfectly bland and soothing. 3/6 lb. Tins, 3/4 per lb. in 7-lb. Tins.

Lanoline Cold Cream.

This is emollient, protective, and healing. It supplies the skin with a "cream," natural to it, and is highly praised for abrasions, mucous patches, herpes, chapped hands, roughness and hardness, &c. 20/ per doz.

Lanoline Pomade.

Hair anointed with this presents no shiny, greasy gloss, and does not stain the hat or anything else that comes in contact with it, for Lanoline Pomade is absorbed at once. It soon makes the hair smooth, silken, and strong, and after employing it a little time the scalp becomes perfectly healthy and free from dandruff. 20/ per doz.

Lanoline Toilet Soap.

Ordinary soaps often cause pimples, blotches and sores on the face, and prevent eruptions already formed from healing. They remove the fat and dry the skin, so that it becomes hard, inelastic, and rough, and loses its natural colour.

Lanoline Toilet Soap is made with Lanoline. Lanoline being the natural fat of the skin, is acknowledged by dermatologists to be the very best preservative of this tissue, restoring it soft, pliable, and elastic nature and healthy gloss. The process of its manufacture precludes the possibility of adulteration, as with rosin, &c., and affords a most superior product.

All the above prices subject to usual discount.

SUPPLIED BY THE WHOLESALE TRADE.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.

S. MAW, SON & THOMPSON'S MEDICINAL GELATINE CAPSULES

	Per dozen		Per dozen,		
			Containing		
			30	36	48
Castor Oil, in square boxes	5/-	In oval screw-cap bottles	5/6	—	8/-
Cod Liver Oil, in square boxes	7/-	Ditto ditto	—	8/-	—
Copaiba, without Name, in oval boxes	4/9	Ditto ditto	5/6	—	8/-
Copaiba, with or without Name, best, in oval boxes	5/9	Ditto ditto	6/6	—	9/-
Copaiba, Flexible, in oval boxes	6/-	Ditto ditto	6/9	—	9/6
Copaiba, Flexible, larger, in oval boxes	8/-	Ditto ditto	—	10/-	—
Copaiba and Cubebe, in square boxes	9/-	Ditto ditto	—	11/-	—
Copaiba, Cubebe, and Buchu, in oval boxes	8/-	Ditto ditto	—	10/-	—
Copaiba, Cubebe, and Sandal-wood Oil, Flexible, in oval boxes	17/-	Ditto ditto	17/-	—	25/-
Oil of Male Fern (18 drops), in square boxes	17/-	Ditto ditto	—	18/-	—
Sandal-wood Oil, Flexible, English, in round boxes	26/-	Ditto ditto	—	30/-	—
Sandal-wood Oil, Flexible, Foreign, in round boxes	20/-	Ditto ditto	—	23/-	—
Tar, Norwegian, in square boxes	6/-	Ditto ditto	—	7/-	—
Terebene, pure (10 drops), in round boxes	12/-	Ditto ditto	13/-	—	20/-
Turpentine, in square boxes	6/-	Ditto ditto	—	7/-	—

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.



ESTABLISHED 1859.

PRINCIPAL OFFICE, 42 CANNON STREET, LONDON, E.O.

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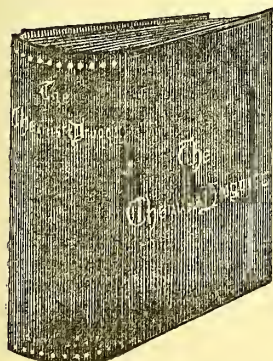
Supplied only to persons connected with the Trade.

For Australasian subscribers the subsidiary journal THE CHEMIST AND DRUGGIST OF AUSTRALASIA is included.

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WE have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, Exchange column, &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in THE CHEMIST AND DRUGGIST, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.



THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.

WE desire to obtain a full list of the limited companies in Great Britain who are carrying on the business of chemists and druggists. We shall be obliged to subscribers who will favour us with the exact names and addresses of any such companies in their respective localities. A brief indication of the character of the business done will also be useful.

COMPETITION—No. 11.

DISPENSING LABELS.

In a paper which we published a few years ago on the cultivation of taste in the practice of pharmacy the writer laid great weight upon the printing of dispensing blanks. The principle which, he asserted, should be followed was to give the written matter prominence and to keep the name and address of the chemist in a subordinate position. The label itself is perhaps not secondary to the manner in which the directions are written; but it is evident that, however neatly a label may be printed, if the directions are badly written, or unequally distributed over the space, all that the printer has done has been undone by the dispenser. This subject is one which troubles most chemists occasionally. They want to see the labels of other chemists. Those in country districts who seldom see printers' sample books would like to know what kind of labels are used by leading houses, and every chance is taken to get a new idea. On the other hand, there is a class who would like to know for certain how much better their labels are than those of all other persons. We should like to satisfy this curiosity, and we now ask our subscribers or their employes to send us one or more of their ordinary dispensing blanks completely filled in with directions and name.

Competitors may send either or all of the particular forms. We propose to make a selection from the specimens sent to us for reproduction. Competitors should therefore pay attention to their penmanship. Writing must be done in black ink. Mixture, pill, ointment, or other dispensing labels are suitable for this competition, which will be open until July 1, and we shall award one guinea for the best label or set of labels sent in, if one person's attempt should be selected, reserving to ourselves, however, the right to distribute instead several prizes of 5s. each. Every competitor must send in his label or set of labels in an envelope bearing on the outside his name and address and the word "Competition," and this envelope must be enclosed in the one addressed to us.

DIARY FOR NEXT WEEK.

Wednesday, June 15.

Aberdeen and North of Scotland Society of Chemists and Druggists. Annual Dinner at Stonehaven.

Thursday, June 16.

Linnean Society, at 8 P.M. Papers:—I. "Flora of Munipoor and Kohima." By C. B. Clarke.—II. "Orchid Fertilisation." By H. J. Veitch.—III. "Ferns of Borneo." By J. G. Baker.—IV. "Japan Fungi." By K. Ito.—V. "South African Botany." By H. Bolus.

Chemical Society, at 8 P.M. Ballot for the Election of Fellows (important). Papers:—1. "The Thermal Constants of Liquid Mixtures." By Professors W. Ramsay and S. Young.—II. "Derivation of Hydrindonaphthene and Tetrahydronaphthalene." By Dr. W. H. Perkin, jun.—III. The Formation of closed Carbon Chains in the Aromatic Series." By F. S. Kipping, B.Sc., and W. H. Perkin, jun.—IV. The action of Ethylene Bromide on Ethylic Sodacetocetate." By P. C. Freer, Ph.D., and W. H. Perkin, jun.—V. "Derivatives of Pentamethylene." By H. G. Colman, Ph.D., and W. H. Perkin, jun.—VI. "Derivatives of Hexamethylene." By P. C. Freer, Ph.D., and W. H. Perkin, jun.—VII. "An attempt to synthesise a carbon ring containing seven carbon atoms." By P. C. Freer, Ph.D., and W. H. Perkin, jun.

Friday, June 17.

Chemists and Druggists' Trade Association of Great Britain. Special meeting, Inns of Court Hotel, High Holborn, at 3 P.M.

Metropolitan Reports.

THE CHEMISTS' ASSISTANTS' ASSOCIATION.—The first meeting of the new Council was held on June 2, when the following principal officers were elected for the coming session:—President—Mr. T. S. Dymond; vice-presidents—Messrs. J. E. Saul and A. J. Phillips; honorary treasurer—Mr. W. R. Dodd, F.C.S.; honorary secretaries—Messrs. E. J. Millard and E. S. Taylor. The president, vice-presidents, treasurer, and Messrs. Bird and Millhouse were appointed on the Publication of the Proceedings Committee.

UNIVERSITY COLLEGE, LONDON.—Dr. William Ramsay, Principal of, and Professor of Chemistry in, University College, Bristol, has been appointed to fill the Chair of Chemistry in University College, London, vacant by the resignation of Dr. Williamson. Dr. Sydney Ringer, F.R.S., has been appointed Holme Professor of Clinical Medicine, in succession to the late Dr. Wilson Fox. Mr. Victor Horsley, F.R.S., has been appointed Professor of Pathology, in succession to Dr. Bastian, resigned.

CRICKET.—**PHARMACEUTICAL C.C. v. FERME PARK,** TURNELL PARK, MAY 28.—In this match Ferme Park scored 35 in the first and 43 in the second innings. The Pharmaceutical only played one innings, and reached 53. Greenfield was top scorer, with 11 to his credit, Woolley and Mowatt each figuring for 9, and Aston, Powell, and Reid recording 5 each.—**TUFNELL PARK, JUNE 4.**—**PHARMACEUTICAL C.C. v. DENTAL HOSPITAL.**—A very evenly-played match. The Dentals made 38 in their first innings, and the Pharmaceuticals fell one short of this total. Woolley and Quinton did the bulk of the work in this innings, scoring 12 and 10 respectively. The second innings of the toothmen resulted in a total of 48, but the druggists seemed likely to neutralise this, as at the call of time they had made 22, and had only lost one wicket. Woolley and Aston were the not-outs, with 8 and 12 to their credits respectively.

DEATH FROM EATING CASTOR-OIL SEEDS.—Last week an inquiry was held by Mr. C. C. Lewis, coroner, at Silvertown, touching the death of a little girl named Margaret Isabella Penman, three years of age, who had died from eating castor-oil seeds. Sarah Penman, mother of the deceased, gave evidence to the effect that on the previous Friday the child had brought up her dinner, and witness gave her two castor-oil seeds as medicine; she believed, too, that deceased had drunk some whisky on the Saturday morning, as she found the bottle with her in bed; witness thought she had drunk nearly half a quart, which she vomited up; witness also knew that the deceased had eaten some more of the castor-oil seeds on Friday afternoon. The child was ill all Saturday and died in the afternoon. John Brennan, surgeon, of St. Catherine Street, Silvertown, said he had never professionally attended the deceased child till the Saturday, when he was called to her about twelve o'clock and found her in a state of collapse; he prescribed for her and saw his instructions carried out. He had been unable to give an opinion as to the cause of death, but on Tuesday he made a post-mortem examination and found that death was caused by the irritant poison contained in castor-oil seeds; these seeds were a very active purgative; there was a case upon record where three of these seeds had proved fatal to a girl eighteen years of age. From what subsequently passed it appeared that these castor-oil seeds or beans are often dropped about in the dockyards, and are picked up by the men and taken home and used as medicine, and the jury having returned a verdict that the deceased child died through eating an excessive number of these seeds, they requested the coroner to suggest to the dockyard authorities that notices ought to be put up about the docks warning persons that these castor-oil seeds are a dangerous poison.

SOCIETY OF CHEMICAL INDUSTRY.—A meeting of the London section, being the last of the session, was held in the Chemical Society's rooms on Monday night, the President, Mr. David Howard, in the chair. There was a good attendance. After the minutes were read and confirmed, Dr. H. E. Armstrong, F.R.S., was called upon to read a paper on "The Alkaloids: the Present State of Knowledge concerning them, and the Methods employed in their Investigation." This

subject is referred to on another page. The reading of the paper occupied about an hour and a half. In moving a vote of thanks to the author the chairman took occasion to refer to the immense difficulties which beset this field of study. Speaking of an alleged synthesis of quinine some months ago, he remarked that when the individual who made the assertion was questioned by him as to the constitution of alkaloids and regarding several of them, such as conine, which had been synthetically prepared, the gross ignorance which was shown was a sufficient proof that the artificial formation of quinine was still in the future. Speaking of the greater progress in this department of knowledge by the Germans, he attributed the backwardness of English chemists entirely to the existence of the Anti-Vivisection Act. Progress in experimental work in synthetic chemistry was only possible with the aid of the physiologist, and the latter could not give that aid without a ticket-of-leave, which few had the courage to ask. Dr. C. R. A. Wright, in seconding the vote of thanks, made some humorous remarks regarding physiological experiments; he was the animal to whom apomorphine was first administered, and his recollection of the circumstance was so vivid that he could not trust himself to speak of the matter in any detail. Another speaker said that he would not enter into discussion on this subject, but he would merely remind the meeting that there was another side to the question—the moral side. Owing to the lateness of the hour a paper by Mr. Boverton Redwood, on a recent visit to some of the petroleum-producing territories of the United States, was taken as read. The chairman called attention to a large number of specimens which were exhibited by Mr. Redwood. These consisted chiefly of crude petroleum, varying from amber-coloured limpid liquids to black and bituminous-like semi-solids. Samples of solid paraffin, asphaltum, and the various earth-constituents—such as clays and sands. These were examined with much interest by the members. The chairman then intimated that the next meeting would be the annual one in Manchester, and he trusted that there would be a large attendance.

The Manchester meeting will be held on July 13, 14, and 15, under the presidency of Mr. David Howard. Mr. Howard will be succeeded in the presidency by Professor James Dewar, F.R.S. The new vice-presidents, in addition to Mr. Howard (who will occupy that position in virtue of having held the office of president), are Professor Clowes, Mr. J. N. Cuthbertson, Mr. Ivan Levinstein, and Professor Tilden, F.R.S. Mr. Barnard S. Proctor has been nominated an ordinary member of the Council.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

A KLEPTOMANIAC CAUGHT.—A chemist of my acquaintance, says a writer in the *Birmingham Daily Times*, having frequently missed a number of small articles from his counter, such as scent bottles, tablets of soap, and boxes of cosmetics, has hit upon an ingenious if simple plan for saving his wares and detecting the would-be stealers thereof. Underneath each article he places one end of a piece of brown silk thread, and to the other end he attaches a small tin box containing shot. When the thread is stretched across the counter, which it resembles in colour, it is invisible to the customers, and the author of the device can use his pestle and mortar behind the screen in the sure knowledge that if anybody attempts to rob him the dropping of the shot-tin will give him intelligence of the fact. One of the persons detected by this means is a lady residing in Edgbaston. She had purloined a valuable hair-brush, and on inquiries being made it was discovered that she had from time to time abstracted a large number of articles for which she could not have the slightest use, and which, in fact, she had put away in secret corners in her home, and never thought of afterwards. As the lady's husband is in a good social position, and she has always plenty of money at command, it was clearly a case of kleptomania, and the idea at first entertained of a prosecution was of course abandoned.

DUBLIN.

PHARMACEUTICAL SOCIETY OF IRELAND.—The usual monthly meeting of the Council was held on Wednesday, June 1. Present: Messrs. Wells, Beggs, Bruncker, Hayes, and Simpson. As a quorum failed to attend no business was transacted.

LIVERPOOL.

A SPACIOUS corner shop of a newly-erected block, situated upon Stanley Road, Bootle, near Liverpool, has been opened by Mr. Harold Wyatt, chemist and druggist.

EATING CROTON-OIL NUTS.—Seven children, whose ages ranged from three to nine years, were taken to the Southern Hospital on Saturday, suffering from the poisonous effects of eating croton-oil nuts. The children picked up the nuts in Argyle Street, where it is supposed they had been dropped by a passing cart bringing them from the docks. Shortly after eating them they were seized with pains in the stomach, and were conveyed to the Royal Southern Hospital by their parents. Five of them, after treatment, found relief, and were able to go home, but two were retained in the hospital for some days.

MANCHESTER.

PRESENTATION TO SIR H. E. ROSCOE, M.P.—On Saturday last the members of the teaching staff of Owens College met for the purpose of presenting a farewell address to Sir Henry E. Roscoe, M.P., on his retirement from the professorship of chemistry, and of presenting to the college a portrait of Sir Henry, to be placed in the Professors' common room. Owing to illness, Sir Henry Roscoe was unable to be present, and a letter was read from him expressing the regret with which he severed his connection with the teaching staff of the college. Principal Greenwood addressed those present, referring in highly eulogistic terms to the work accomplished by Sir Henry Roscoe for his college and for chemistry. The portrait was painted by Mr. John Burgess, A.R.A., and was regarded in all respects as admirable.

SHEFFIELD.

PROPOSED PUBLIC DISINFECTING STATION.—Dr. Sinclair White, medical officer of health, has, by instruction of the Health Committee, after consultation with the borough surveyor, made an estimate of the cost of providing and maintaining a public disinfecting station in the borough. He suggests a suitable site for the station, and, as to the choice of a disinfectant, says it is now almost universally acknowledged that super-heated steam is the best, in fact, the only reliable agent for disinfecting large articles, such as beds. The cost of working a steam apparatus is very small, and, in addition to being a much more reliable disinfectant, it will get through many times more work than any other apparatus. He recommends, therefore, that one of Lyons's super-heated steam-disinfectors be procured. Dr. White estimates that the initial outlay of the station would be 581*l.*, and the annual cost 230*l.* The committee received the report, but do not appear to have recommended it for adoption.

SCOTLAND.

ABERDEEN.

DR. KNOWLES has removed his shop from Skene Square to George Street.

MR. GAVIN L. CRUICKSHANK has commenced business at Fyvie.

MR. JOSEPH ALLAN FOWLIE WHYTE, of New Deer, has commenced business in Fraserburgh.

A MEMORIAL on the lines of "Brighton Memorial" is being signed here, and is expected to be ready for presentation at the next meeting of the Council of the Pharmaceutical Society.

A JUBILEE GIFT TO THE CROFTERS.—Messrs. Prentice Brothers, agricultural chemists, Stowmarket, Suffolk, have taken a very practical way of celebrating the Queen's Jubilee.

They have presented 1,000 bags of manure to the Scottish Highland crofters.

EDINBURGH.

THE Edinburgh and Leith Post Office Directory for 1887-8, which has just been published, contains the names of 250 medical practitioners, being an increase of 11 over last year. Drug shops appear to increase less rapidly. There are 115 establishments this year, as against 112 last year. Of these 13 firms have two shops, four have three, and two have four, making in all 27 branch shops, or 23 per cent. of the whole. All the "unqualified" drug stores are classified under the heading of "chemists and druggists."

SCARLET FEVER.—Dr. Alexander Edington, assistant to Professor Chiene in the surgical department of the University, and Dr. Allan Jamieson, of the City Fever Hospital, have recently made some investigations on the subject of scarlet fever, Dr. Edington dealing with the nature of the contagion, while Dr. Jamieson deals with the spread of the disease, and a method of prophylaxis whereby it may be diminished. The conclusions which they have arrived at are different from those of Dr. Klein, to whose researches reference was made in last week's issue of this journal. An account of the investigations will be published, and it may be expected that considerable discussion of a controversial nature will result. The matter is causing considerable interest in Edinburgh, where scarlet fever has lately been epidemic.

ALBUMEN IN URINE.—At the meeting of the Royal Society of Edinburgh on Monday Professor Grainger Stewart read a paper on the discharge of albumen from the kidneys of healthy people. He had found that out of 407 individuals albumen was present in 129, or 31 per cent. Some of the results were of a curious character, for example:—Soldiers, 15.6 per cent. showed albumen before breakfast, 40.6 per cent. after breakfast; old men, 37.5 before and 67.5 after breakfast. Before a party of soldiers had any exertion 29 per cent. showed albumen, and on their return from an eight miles' march the percentage was 19, showing that its absence was favourably influenced by exercise. The Professor's researches had led him to the following conclusions:—That albuminuria is much more common among presumably healthy people than was formerly supposed, tests having demonstrated its presence in nearly one-third of the population; that the frequency of albuminuria increases as life advances; that it is more common among those whose occupations involve arduous bodily exertion than among those who lead easy lives; that albumen frequently follows the taking of food, especially of breakfast, which more than any other meal increases the amount of albuminuria; that moderate muscular effort rather diminishes than increases albuminuria; that it is often induced by violent and prolonged exertion; that cold bathing produces or increases it in some individuals; and that the existence of albuminuria is not of itself a sufficient ground for the rejection of a proposal for life insurance.

PROSECUTION UNDER THE PHARMACY ACTS.—In the Edinburgh Sheriff Summary Court, on Monday, a complaint at the instance of Richard Bremridge, Bloomsbury Square, London, registrar under the Pharmacy Acts, against the Leith Depôt (Limited) was to have been heard before Sheriff Rutherford, but, with the consent of both parties, was adjourned by his Lordship for a fortnight. The charge bears that Andrew W. Gray, residing at 107 Ferry Road, Leith; Andrew Gray, inspector of works, Leith; William Taylor, law clerk, Richmond Terrace, Edinburgh; Jane Maria Gray, Ferry Road, Leith; David Ovens, Leith; James Fettes, Marchmont Crescent, Edinburgh; and Marjory F. J. Fettes, have been guilty of an offence against the Pharmacy Act, 1868, in so far as they did, between December 1, 1886, and May 17, 1887, together or separately, take, use, or exhibit the title of chemist and druggist in connection with a shop at No. 49 Leith Walk, occupied by the Leith Depôt (Limited), of which they are stated to be the sole partners and shareholders. It is further stated that they issued to the public printed circulars, labels, and advertisements with the words "chemists and druggists" printed or written thereon, and none of those named being a duly registered pharmaceutical chemist or druggist. A statement is also made to the effect that Andrew W. Gray, on November 1, 1886, within the office of the Registrar of Joint Stock Companies, Parliament Square, used the title of "chemist and druggist" to a memorandum

of association of the Leith Dépôt (Limited), and that David Ovens and Robert Fairweather, employés of the company, unlawfully sold poisons on dates mentioned to Alex. Coats, Edinburgh.

GLASGOW.

FEMALE SANITARY INSPECTORS.—A somewhat novel experiment, under the Sale of Food and Drugs Act, has recently commenced here, and, if we may judge from a case which was decided at the Glasgow Sheriff's Court last week, it bids fair to be a successful innovation. It is Mr. Peter Fyfe, the sanitary inspector, who, conscious of the wariness with which grocers supply butterine to male purchasers, conceived the idea of employing a female to make his purchases. A charwoman was accordingly employed, but it was contended in Court, and the judge supported the contention, that a temporarily-employed person was not a properly-constituted official under the Act. Mr. Fyfe soon remedied that flaw in his procedure, and now has Elizabeth Kennedy or Gordon as a member of his staff. Elizabeth went to a grocer's one day, along with her female colleague, and asked for "a pound of that butter at a shilling." A young assistant supplied her, then she told him that her object was not to catch a train but his master for selling adulterated butter. Then the young man had a wrestle with Elizabeth, in order to get back the "butter," and last week his master wrestled with the law, the result being a penalty of 2*l*. Elizabeth is a success.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

THE HERBALISTS STRUGGLING FOR LIFE.—While physicians, pharmacists, and veterinarians are agitating for satisfactory legislation, with the chances in favour of veterinarians being "served first," the herbalists (herboristes) do not remain idle. On May 29 Deputies Vergoin, Perillier, and others reported favourably upon a Bill presented to the Lower House respecting herbalists, which had been referred to the usual committee. It will probably be remembered that the pharmacists are trying to obtain the suppression of both their brethren of the second-class and of the herbalists. But the botanical knights mean to fight for existence, and seem to have stolen a march on their opponents.

ILLEGAL PRACTICE AND SECRET REMEDIES.—Unsatisfactory as the present law may be to pharmacists, the courts appear to enforce it in a way that cannot be otherwise than advantageous to the profession. A druggist by the name of Caine was recently prosecuted at Lyons (1) for unlawfully practising pharmacy, and (2) for selling secret medicines. On the first count it was proved he was the owner of a pharmacy at 71 Cours d'Herbouville, but that he was assisted by a regularly graduated pharmacist. The court held it well-established jurisprudence that no one without a diploma is qualified to own a pharmacy, even when he has it managed for him by a graduate. It is well settled that the same person must own and manage each particular establishment, and may not own and manage more than one. On the second count, a secret preparation known as "Sirop pectoral au miel Finot" was proved to have been both advertised and sold, and it makes no difference whether the seller is a pharmacist or not. Therefore Caine was sentenced to a fine of 500*f*. on the first count, of 25*f*. on the second, and to all the costs of the prosecution.

PROFESSOR RAOUL PICTET AND HIS COMPANY.—The company for the commercial exploitation of Raoul Pictet's freezing processes have scored a success in a lawsuit in which they have for some time been engaged with their own creator, M. Raoul Pictet, Professor at the Geneva University. Some years ago this gentleman sold to the company his valuable inventions bearing upon the artificial production of cold and ice by the liquefaction of certain gases, and agreed to hand over to them any future inventions which he might make respecting the artificial production of cold, the manufacture of sulphurous acid, and kindred subjects, the company to have the right to accept or refuse the invention within three months of its communication by the inventor. Professor Pictet has recently brought out a new freezing substance, to which he gives the formula SCO_2 . It is a compound mixture of carbonic acid gas and sulphurous anhydride, and it would

seem that he wished to turn this invention to commercial advantage independent of the company with which he was under engagement. The latter claimed the exclusive right to the invention, and obtained a verdict in the first instance, against which Professor Pictet appealed. The Paris Court of Appeal then appointed three experts, Messrs. Gal, Schützenberger, and Lévy, to investigate the matter in dispute, and the result has again been favourable to the company.

THE GENERAL ASSOCIATION OF FRENCH PHARMACISTS.

THE Association générale des pharmaciens de France is, as its name indicates, a national society, open to members practising in any part of the French Republic. The aims of the association are to form a centre around which all the local societies may unite in common efforts, to foster the organisation of new societies where none exist; to protect the pharmacist against wrong and encroachment; and in a general way to promote the welfare and interests of pharmacy.

The association held their annual meeting on June 1 and 2, the second session, in the Salle des Etats of the Paris College of Pharmacy, being more especially the general meeting open to all. President Petit was at his post, with Vice-President Rabot, of Versailles, on his right, and Perpetual Secretary Crinon on his left, while M. Bocquillon was requested to act as secretary for the occasion. About 75 persons were present. The following societies were represented, besides four more whose names could not be distinguished:—Ardennes, Aube, Bouches du Rhone, Calvados, Cannes, Centre, Corrèze, Deux Sèvres, Est, Gard, Indre, Loir-et-Cher, Loire, Loire Inférieure, Marne, Nièvre, Seine-et-Marne, Seine-et-Oise, Var, Toulon, Vancluse, and Vendée.

The presidential address, besides the customary allusions to the current affairs of the association, contained some interesting information. The President admitted that the Parliamentary Committee having in charge the Pharmacy Bill are not quite friendly to the profession. Perhaps it would be better not to press matters now, and to wait till the next session.

Secretary Crinon, who is a graduate of law as well as pharmacy, was attentively listened to while delivering the annual address, reviewing the progress of the year just ending. Defending the General Association against some criticisms, he denied that Paris pharmacists had any intention of lording it over their provincial brethren. To disprove such accusation, the mode of representation has been altered, so that in the directing council Paris is not to have even the number of councillors she is entitled to by her proportion of active members. Discussing the Pharmacy Bill, M. Crinon related the efforts made to secure favourable legislation, and admitted that the suppression of pharmacists of the second class was not likely. The law-suits instituted by the Association were next reviewed (most of the cases were at the proper time noticed in THE CHEMIST AND DRUGGIST) and the statement made that nearly 4,000*f*. had been thus expended with most beneficial effects in the interest of pharmacists. The Benevolent Fund was also reported upon, as well as the proposed Mutual Insurance against dispensing accidents. Finally, the French railroad companies were blamed for refusing to pharmaceutical delegates the concessions granted to medical delegates under the same circumstances. But railway corporations are so used to be kicked at that they will likely remain obdurate.

M. Champigny read a report on the financial affairs of the Association, showing an increase of assets, and a prosperous situation generally. After some routine business had been disposed of, M. Crinon made an informal but exceedingly interesting communication respecting the progress of the Pharmacy Bill now before Parliament, the inside working of committees, &c., and M. Duval, who is a Deputy from Haute-Savoie, enlightened his hearers on Parliamentary ways, and the poor prospects of any sort of Bill that has no political bearing, directly or indirectly. The impression left was that the final shape of the law, when it passes, is most uncertain; that the survival of pharmacists of the second class is very probable; and that the interests of the pharmaceutical body are looked after by watchful men who neglect nothing that may benefit pharmacists, and oppose anything that may be to their detriment.

THE MANCHESTER EXHIBITION.

SECOND NOTICE.

TWO galleries are devoted to exhibits illustrative of the "chemical and allied industries." This great department is composed of several sub-sections, the exhibits representing a particular industry being placed together so as to form a compact group.

Commencing at the extreme end of the principal gallery we find ourselves among the soap manufacturers, mostly Lancashire firms, several of which are pushing their trade by presenting to each passer-by a packet of their principal specialty.

Messrs. Wm. Gossage & Sons, of Widnes, with their extensive exhibit, occupy an excellent position in a kind of recess in the gallery. Here they illustrate their manufactures by showing various crude materials employed in soap-making, such as palm kernels, imported from Western Africa, and ground at the Widnes factory, cotton seed, cocoanut oil, &c. There are also large vessels of by-products, prominent among which is glycerine, an article bought in large quantities from the firm by dynamite manufacturers. Silica, fused with carbonate of soda, yields a soluble glass, an aqueous solution of which enters into the manufacture of compound soaps and is also employed in calico printing; in fact, the drapery with which the exhibit is gracefully decorated has been printed with this material. The principal piece of Messrs. Gossage's exhibit is an enormous pyramid of mottled soap of various colours, flanked by a very much smaller one, which did duty at the International Exhibition of 1862. From that year until the present time the firm have sold, we were informed, no less than 220,000 tons of blue mottled soap.

Messrs. Robert Oliver & Co., of Rochdale Road, Manchester, have a case of engine oil and other lubricants specially blended so as to be most efficacious for the purposes to which they are applied. This firm also exhibit fine specimens of white sizing soap in bars and beautiful samples of tallow. Similar products are contained in the case belonging to Messrs. Jas. Light & Son, of 11 Rumford Street, Liverpool. The latter also show locomotive grease, bearing a remarkable resemblance to the Japanese fish wax so often seen in Mincing Lane showrooms, and various fish products, such as cod and whale oils. This exhibit, with many others in this quarter of the chemical section, is at a disadvantage as regards the general public owing to its unavoidable lack of colour. Engine greases and fish oils are not distinguished by striking variety of hue, and the somewhat monotonous aspect of these cases no doubt prevents the attraction of as many spectators as their intrinsic merits would warrant.

Messrs. Joseph Kershaw & Co. are prominent with compositions. Non-conducting, banding, rope-driving, and detergent compositions are their specialties. The exhibit derives a rather pleasing aspect by the addition of red, blue, black, and other varnishes and paints, ready for use. Scouring and other domestic soaps are also shown in this case. The next stand belongs to Messrs. William H. Samuel & Co., the well-known Liverpool oil merchants, who have a good variety of machine oils and greases. Besides blended products, they show samples of colza, olive, and seal oils. The latter particularly appeared to us of excellent quality. The small stand of Mr. E. W. Wollaston, 12 Dutton Street, Manchester, demonstrates the effect which may be produced by a tasteful arrangement of apparently uninviting materials, such as petroleum, cotton-seed oils, and fish oils. There are also samples of palm grease, of a deep orange tint, a fine specimen of tallow, cocoanut oil, &c. Messrs. J. Veitch Wilson, Halliday & Co., of Queen Street, Manchester make a specialty of compound machinery oils, for which they find a ready sale among the Northern railway companies, and are also dealers in crude vegetable oils. Both varieties are exhibited in their spacious stand.

A large stand is devoted to the exhibits of Messrs. Colledge, Roy & Co., 5 Brown Street, Manchester, who have made their exhibit interesting by showing the various stages of manufacture which the paraffin undergoes after its extraction from the Scotch paraffin shale. Tallow and tallow substitutes for use in chemical factories also occupy a not inconsiderable portion of the space.

Messrs. Lever Brothers, of Warrington, have a large exhibit mainly occupied by a model of their works in white fibrous plaster. Their exhibit attracts a constant crowd of sight-seers, less, it may be presumed, because of any tastefulness in its appearance or variety of exhibits, than owing to the liberal distribution of small samples of soap and highly-coloured advertising cards. Messrs. Senior & Brooks (Limited), of Cross Street, Manchester, pleasingly vary an exhibit of different engine oils by a show of very nicely got-up toilet soaps in boxes bearing designs suggestive of the Jubilee. They also show a good assortment of glycerine soaps and of high grade olive oils. On the whole, their exhibit is so attractive that many visitors are no doubt tempted to take the firm's card away with them. For such, however, disappointment is in store, for the card-box is empty, and its "Please take one" a delusion and a snare. It may here be observed that throughout the chemical section the supply of literature and cards is extremely deficient. Most firms content themselves with a simple exhibition of bottles containing liquids and crystals, and securely locked up in a glass case, though one would think that the distribution of a few shillingsworth of price-lists could not but be advantageous to the exhibitors. Messrs. Geo. Fairclough, of Princes Street Oil Works, and G. & G. W. Skelton, of 15 Quay Street, Manchester, have each an exhibit of lubricating oils, the former firm also showing a model of "Fairclough's sight feed lubricator." Mr. John Sandeman, of the Rushill Oil Works, Glasgow, has a very good collection of rosin in various stages of manufacture, drying oil, and pine oil for batching jute. Batching is a process which jute undergoes previous to being spun. The firm appear especially anxious to cultivate a colonial trade, and are manufacturers of special greases suitable for export.

A beautiful and extensive stand is that occupied by the exhibits of Messrs. A. B. Fleming & Co., oil refiners, printing-ink and chemical manufacturers, of Edinburgh. This firm have for many years occupied a space at nearly all important exhibitions, and they are therefore adepts in the art of dressing a show-case so as to show their different goods to advantage. Lubricating oils and agalite, a mineral fibre, form the principal exhibits of the firm on this occasion. Messrs. Fleming & Co. cultivate a very large export trade, and several hundred newspapers all over the world are said to be printed with their ink. A few years ago it was calculated that the firm consumed about 6,000 tons weight of crude materials annually in their manufactures, two-thirds of which again left their works in the shape of finished products. Messrs. David Shaw & Co., of 35 Market Street, Manchester, are exhibitors of chemical manures, vegetable and animal oils, and stearine, which latter is exhibited in the shape of a fine bust. Of a very different nature to the surrounding exhibits is that of Mr. Frederick Round, an enterprising chemist, of 10 London Street, Southport, who calls the attention of visitors to his preparation, "Pedeline." This remedy, for hardening the feet, is put up in the form of a soap in 6d. cakes, and of a powder in tins, to retail at 6d. and 1s. each. "Pedeline," the attendant assured us, would be offered for sale exclusively by chemists and boot factors. The Health Soap Company, of Bootle, Liverpool, have a large exhibit of pale yellow soap in bars for domestic and laundry purposes. The exhibit itself is somewhat colourless in appearance, but it is embellished by a representation of the company's trade-mark, showing two bilious-looking cherubs holding a bath-tub as an emblem of purity. Messrs. Robert Brown & Co., of Newton Street, Manchester, are well to the front with a fine and extensive exhibit of toilet, blue Windsor, carbolic, and similar soaps. Their stand is neatly arranged, and is especially noticeable for the numerous busts of Her Majesty and the late Prime Minister with which it is adorned. Messrs. Brown & Co. also show a good variety of silk, cotton, and wool-cleaning soaps, with samples of the materials in question before and after contact with the firm's specialties.

Messrs. Joseph Crosfield & Sons, of Warrington, undoubtedly create one of the sensations of the Exhibition by their beautiful display of mottled soap. Many hundred-weights of this commodity in various colours, among which red, green, blue, and grey mottled predominate, have been used to build up an oriental mosque about twelve feet in height, and imparting a really beautiful aspect to the section of which it is the chief ornament. Next to this exhibit is a

stand of the "Perfection" washing soap, and a variety of fine scented toilet soaps.

"Kilvert's Pure Lard" is the motto of the next case, which contains a supply of that commodity in tins, jars, cans, tubs, and almost every other conceivable form of packing. The circumstance that the whole of the lard is thus put up naturally detracts from the interest of the exhibit, but Messrs. N. Kilvert & Sons, whose lard-refining works are situated at Manchester, partly make up for this drawback by a distribution to each visitor of a pamphlet on economical cookery, in which the pure lard is held up as an indispensable ingredient in every conceivable dish of prepared food, from mock turtle to seed cake.

Messrs. Henry Shaw & Co., chemical manufacturers, of Dukinfield, who show various kinds of soaps and blue, alternating with borax, ultramarine, and other raw materials, cannot be said to have displayed their goods to the best advantage, although their exhibit does not otherwise lack in interest. The "Sensation" soap manufactured by Messrs. David Thom & Co., of Pendleton, who occupy the adjoining stand, is freely distributed to an appreciative public, who appear to follow with a profound interest the working of the little hand-punching machine, by which each cake is provided with the imprimatur of the makers. Messrs. Joshua Margerison & Co., of Preston, have a large stand of white Windsor soap, especially recommended for washing clothes and other domestic purposes. The exhibit is adorned with a good many busts of the Royal family and of Presidents of the United States, which busts, we were told, were finished by one of the members of the firm. Mr. John Higson, chemist, of Blackburn, is the proprietor of a medicinal soap specially recommended for skin diseases and the removal of warts, which retails at 1s. 6d. per three tablets, and is said to have proved efficacious in very many cases. Five pyramids of soap are exhibited by Messrs. T. B. Rowe & Co., of Brentford. Their Brentford mottled soap is intended for use by cotton manufacturers, while the Bengal yellow is specially adapted for cleansing silk. The Brown oil soap also finds employment in the silk trade. Mr. William Brown, of 47 Oldham Road, Manchester, has two fine columns of red mottled toilet soaps, and a few bars which were exhibited at London in 1862, and appear to have lost but little of their freshness. The case belonging to Messrs. James Alexander & Co., of 18 Paradise Street, Lambeth, contains specimens of soap not found in any other exhibit, viz., refined pumice soap, witch hazel soap, and several other preparations, of which *Hamamelis virginica* forms a prominent ingredient. The firm's stand, though not one of the largest in the Exhibition, is very neatly arranged. The Chiswick Soap Company have an interesting exhibit, including the famous Sapo mollis, B.P., and a paler soap made from cotton seed. Here also is to be seen the green olive oil which has recently formed a subject of discussion in the columns of THE CHEMIST AND DRUGGIST, and various other oils and potashes entering into the manufacture of the firm's specialties.

Messrs. Jos. C. Paton & Co., 5 Chatham Street, Piccadilly, Manchester, show packets of their domestic soap economiser, a powder which lathers freely in hot or cold water. Their trade-mark suggests the famous dirty boy in a stage of violent madness. Messrs. Gray, Smith & Bennitt, of Wath-upon-Dearne, have two nice exhibits of household and toilet soaps and starches, and a show of the crude materials from which the former are manufactured. The favoured device of having the trade-mark executed in soap is also resorted to by this firm. Messrs. Hazlehurst & Sons, of Runcorn, exhibit their "household and export soaps" in pyramids of different colours, and also show crude and refined glycerine, the former as recovered from the spent lye. Messrs. Geldart & Co., of Rathbone Road, Old Swan, Liverpool, exhibit transparent Sapo mollis in screw-covered glass jars, which they recommend for personal use and for linen and plate cleaning. They are also manufacturers of "Niger" blacking. Messrs. Bagnall & Co., of Red Bank Oil Works, Manchester, have a good show of engine oils and greases, while Messrs. Smith & Forrest, of Holt Town, Manchester, show crude products, such as shale, American rosin, crude turpentine, and coal tar pitch. The section is closed by a bright looking exhibit of soaps manufactured by Messrs. Roy & Co., 5 Brown Street, Red Bank, Manchester. The red complexion and other toilet soaps shown by this firm are particularly effective.

Gazette.

PARTNERSHIPS DISSOLVED.

- CURTIS & CROSS, Bristol, manufacturers of mineral and aerated waters and summer drinks and cordials.
GLANVILLE & WARNER, Fulham Road, surgeons.
JOHNSON, F. H., & JAGGER, J., under the style of James Jagger, Rastrick, aerated-water manufacturers.
WESTBROOK & WEDDELL, Sheffield and Hillsbro, surgeons.

THE BANKRUPTCY ACT, 1883.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

- COOKE, PHILIP, Church Row, Wandsworth, chemist and newspaper proprietor. June 20, 109 Victoria Street, Westminster; June 16, Court House, Wandsworth.
HUNT, TOM OLIVER, Leominster, surgeon and apothecary. June 16, 18 Corn Square, Leominster; June 30, Town Hall, Leominster.
PLOMLEY, WILLIAM, Peasmarsh, Sussex, veterinary surgeon. June 15, County Court office, Hastings; June 27, Town Hall, Hastings.
TAYLOR, EDWARD, Birmingham, drysalter. June 14, 25 Colmore Row, Birmingham. June 29, County Court, Birmingham.

ADJUDICATIONS.

- ADAMSON, WILLIAM BOWSER, Newcastle-on-Tyne, druggist and drysalter.
PALMER, THOMAS WILLIAM GASCOIGNE, Cheltenham, dental surgeon.

DECLARATION OF DIVIDEND.

(BANKRUPTCY ACT, 1869.)

- HUGGINS, H. J., Hornsey Park Road, Hornsey, and Hermes Hill, Rising Hill Street, Pentonville, manufacturer of bottle-washing machines, late Chief Justice of Sierra Leone. Third and final dividend of 5s., on and after June 6, Mr. R. Rabbidge's, 32 Poultry, City.

NOTICES OF DIVIDENDS.

(BANKRUPTCY ACT, 1883.)

- HARRIS, EZRA EDMUND, and GOODWIN, FELIX (trading as Harris, Goodwin & Co.), Leadenhall Street, City, Birmingham, Shanghai, Hongkong, Singapore, Brisbane, Sydney, and Christchurch, New Zealand, and as Harris & Goodwin, Batavia, Java, general merchants. First dividend of 1s., June 10, Mr. H. Godfrey's, 22 Queen Street, E.C.
KITCHING, CHARLES, Oakengates and Hadley, Salop, chemist, druggist, and aerated-water manufacturer. First and final dividend of 10 $\frac{3}{4}$ d., any day, Official Receiver's office, Ludlow.
MARGETSON, JAMES FRANCIS, Halesworth, Suffolk, chemist, druggist, and dentist. First and final dividend of 10d., June 6, Official Receiver's office, Norwich.
TANNER, NICHOLAS WILLIAMS (deceased), late of Crediton, chemist. First dividend of 10 $\frac{1}{4}$ d., June 21, Official Receiver's office, Exeter.

ORDER MADE ON APPLICATION FOR DISCHARGE.

- FORSTER, GEORGE GRAHAM, Compton Terrace, Islington, late of Old Elvet, Durham, surgeon-dentist. Discharge suspended for three months.

MR. C. C. VEVERS, in his little book on "Practical Amateur Photography," gives the following for a *mounting medium*:—Gelatine, 3ij.; glycerine, 3ss.; methylated spirit, 3ij.; water, 3viij. Dissolve gelatine in the water and add the glycerine and spirit. Made with glue or cheap gelatine this would suit for an adhesive paste.

Legal Reports.

THE HOP BITTERS COMPANY v. THE SOUTHAMPTON DRUG COMPANY.

ON Tuesday, June 7, Mr. Theodore Aston, Q.C., again mentioned the motion in this action to Mr. Justice Stirling, sitting in the Chancery Division of the High Court of Justice. He said it had been agreed between counsel on both sides that the motion should stand over until Friday week, with liberty to either side to cross-examine any of the witnesses who had filed affidavits. An arrangement had also been come to between the parties as to the dates on which the remainder of the evidence for the defence and affidavits in reply should be filed. The motion was ordered to stand over accordingly. [The defendants in this case put up a preparation called "Genuine Hop Bitters" in square amber bottles.]

BECK v. THE HOP BITTERS COMPANY (LIMITED).

THE motion in this action for an interlocutory injunction until the trial of the action on further order also came on on Tuesday, June 7, before Mr. Justice Stirling.

Mr. Graham Hastings, Q.C., and Mr. Richard Nevill, instructed by Messrs. Neve & Beck, Luton, appeared for Mr. Beck, and the defendant company were represented by Mr. Aston, Q.C., and Mr. Swinfen Eady, instructed by Messrs. Francis & Johnson, Austin Friars.

Mr. Graham Hastings, Q.C., said he was instructed to move on behalf of the plaintiff, Mr. Albert Neve Beck, chemist, Hastings, to restrain the defendant company, their servants, and agents from issuing and posting, or otherwise publishing, a bill or poster headed "Proclamation H. B." in or about Hastings, from suggesting that the defendant company alone made genuine hop bitters, and from suggesting that the plaintiff's compound tonic hop bitters were not genuine. The motion came originally before the Court in March last, when, at request of Mr. Aston, it was ordered to stand over until April 19, when the usual order for cross-examination was made. That order had been acted on, and until the trial of the action there had been an undertaking given not to publish or circulate any more of these "proclamations." The examination was one of a most extraordinary character, for the defendants not only examined the plaintiff's witnesses with reference to the circulation of these proclamations, but they examined them with regard to entirely different matters, relevant only to the action of the Hop Bitters Company v. Beck. The position of the plaintiff was as follows:—The plaintiff was a chemist carrying on business at Hastings, and he sold both retail and wholesale a certain preparation which he called "Beck's Compound Tonic Hop Bitters." The defendants were a limited company, and claimed the sole right to sell and manufacture hop bitters. In the beginning of the present year the defendant company brought an action against the plaintiff to restrain him, amongst other things, from selling hop bitters, and from representing that his tonic hop bitters were the hop bitters of the company. The motion came on—or, rather, did not come on—on February 17, when the plaintiff company did not venture to open their motion, but asked that it should stand over until the time of the action. There being evidence that the company were sending threatening letters to Mr. Beck's customers, he (Mr. Hastings) asked that his learned friend, Mr. Aston, should give an undertaking on behalf of the plaintiff company to discontinue sending such letters or notices. Mr. Aston was unable to give such undertaking, but expressed the opinion that pending the litigation the practice should be discontinued. So the matter rested, and that was the state of things on March 16, when the Hop Bitters Company caused to be posted on the walls of Hastings and neighbourhood, and exhibited in shop windows and elsewhere, a poster headed "Proclamation H. B.," of which Mr. Beck complained. The bills were posted within a few hundred yards of the plaintiff's shop, and there was abundant evidence to show that the residents of Hastings thought it was the plaintiff (Mr. Beck) who was intended to be described as one of a class designated as "unscrupulous tradesmen, tricksters, and swindlers, who were imitating and vending compounds in a guise calculated to deceive." The proclamation had been prepared by the manager of the Hop Bitters Company. It

was plentifully sprinkled with capital letters, and was as follows:—

PROCLAMATION I

H. B.

AS much serious injury is done, and persons made to part with their money under deception, during the brief interim which elapses between discovery of an imposture and its termination by the LAW—we have to WARN the Public, Invalids, and the Aged and Infirm who wish to be restored to Health, and derive benefit by the use of that marvel of Curative Medicines (the name of which is a household word), against all Compounds, either as beverages or otherwise, which are being foisted on the public under false pretences, purporting to be HOP BITTERS. No Compounds, under whatever guise, can resemble the famous HOP BITTERS which is manufactured only by THE HOP BITTERS COMPANY, Limited, 41 Farringdon Road, London, E.C. HOP BITTERS is not a Beverage, but a medicine, known and prized by the Medical Faculty and MILLIONS of HER MAJESTY'S SUBJECTS, and admitted by everyone competent to judge, and those who have tried them for Sickness and enfeebled systems, to have the most wonderful and all-significant Curative Powers of any remedy known to mankind.

Protection against Fraud.

Complaints from this quarter have quite recently reached us in such numbers that we feel it our duty to warn the public against unscrupulous tradesmen, tricksters, and swindlers, who are imitating and vending Compounds in a guise calculated to deceive. Any persons who may be deceived in purchasing HOP BITTERS, and be led to believe that the Compounds of other persons are HOP BITTERS manufactured by the Company, are requested to communicate with the Company without delay. We have determined to bring to the High Court of Justice, and prosecute with the utmost vigour, any vendors of Compounds who commit fraud by deluding the Public in the sale of stuffs imitating Genuine HOP BITTERS.

OBSERVE!

Genuine HOP BITTERS is not a BEVERAGE.

Genuine HOP BITTERS is the Best Known "Family Medicine."

Genuine HOP BITTERS is not Sold in Packets.

Genuine Hop Bitters can only be had in square Amber-Coloured Panelled Bottles, with Dr. Soules' name blown in the glass; and on the White Label a GREEN HOP CLUSTER, and at its foot our name and address—

THE HOP BITTERS COMPANY, Limited,
41 Farringdon Road, London, E.C.

✂ A 6d. Government Stamp is over the neck of each Bottle.

Now, it was well known in Hastings that the Hop Bitters Company had commenced an action against Mr. Beck to restrain him from selling his compound tonic as hop bitters, as he had been in the habit of doing; and when this "proclamation" was issued before the commencement and the termination of the litigation, it was naturally supposed that Mr. Beck was one of the "unscrupulous tradesmen, tricksters, and swindlers" against whom proceedings were directed. No litigation had been commenced against any person in Hastings by the company, except Mr. Beck, and therefore any person reading the poster naturally came to the conclusion that it was directed against Mr. Beck, the litigation against whom was well known. The result of the action of the Hop Bitters Company had been disastrous to Mr. Beck, whose sale of his tonic bitters had greatly fallen off. At first the action brought against him stimulated the trade, but since then, in consequence of threatening letters and the other means employed, the plaintiff's trade had fallen off to one-half.

Mr. Aston said when the examination was being carried on before the examiner, Mr. Swinfen Eady applied for the production of the plaintiff's books, but they were not produced. The plaintiff was also asked to produce his recipe, for the company said that his so-called hop bitters were made without hops; but the plaintiff refused to produce his recipe. He now asked his Lordship to make an order that these exhibits should be produced, so that the defendants might put some questions with respect to them.

His Lordship said this was an interlocutory application, and he must deal with the motion on the materials before him. He could not make any such order now—an order for production should have been asked for whilst the examination was going on.

Mr. Hastings continued: Towards the end of the month of March the Hop Bitters Company sent a number of threatening letters to traders carrying on business in Hastings, St. Leonard's, Eastbourne, and elsewhere, who had purchased from Mr. Beck, and were selling Beck's tonic hop bitters. The result of such letters was that the sale of Mr.

Beck's compound was checked, and in some cases his customers returned all the bottles which they had in stock, because they were anxious not to be made parties to actions. The Hop Bitters Company alleged that Mr. Beck's compound was innocent of hop, but although Mr. Beck very naturally refused to allow the company to see his recipe, it was a fact that his compound tonic did contain an infusion of hop, and was properly called compound tonic hop bitters.

The affidavit of Mr. Alfred N. Beck, chemist, of Hastings, and other affidavits were then read bearing out the opening statement of counsel. Extracts were also read from the report of the evidence taken in chambers, especially that of Harry Love, of Hastings, the billposter who had been employed to put up the "proclamations," and of Mr. Angus Cameron, the manager of the Hop Bitters Manufacturing Company. Mr. Cameron's evidence was largely to the effect that in preparing the "proclamation" he had not Mr. Beck's article specially in his mind.

In conclusion the learned counsel submitted that a case had been made out for the interference of the Court.

Mr. Aston said he would not attempt to contend that the case which had been set up against the defendant company was free from difficulty. What he proposed to do was to lay before the Court the contention of the Hop Bitters Company, especially with regard to Mr. Beck's case, which might be taken as a type of others. It was very true that "hop bitters" being a descriptive term, persons had the right to manufacture and sell hop bitters, but it was equally true—and it was not disputed—that the Hop Bitters Company had for many years carried on business as the Hop Bitters Company, and had registered a trade-mark, of which a bunch of hops formed an important part. It was true that the public, having for many years been familiarised with the Hop Bitters Company's hop bitters, had come to use the short term "hop bitters" as a generic term applied to the tonic manufactured and sold by the Hop Bitters Company. An analogous case was to be found in that of Dent's watches. When a Dent's watch was only made by Dent in the Strand, a Dent watch meant a Dent in the Strand's watch. But when the family divided a difficulty arose. The learned Vice-Chancellor said a man could not be prevented from using his own name, but the defendant must take care, inasmuch as Dent's watches were known in the market as made by Dent in the Strand, to earmark his watches in such a manner that he could exercise his legal rights in a fair manner. The defendant must, therefore, mark his watches "T. D. Dent's," so as to distinguish them. That was an analogous case to the present, and the Hop Bitters Company were simply attempting to protect their legal rights by publishing this "proclamation." In the action commenced by the Hop Bitters Company Mr. Beck was sued for selling his goods as those of the Hop Bitters Company, and he was also sued for using the company's trade-mark. The matter had come before the Court, and the Court, therefore, knew that the Hop Bitters Company were practically engaged in a struggle against some branches of the trade. They had it on the affidavits that "unscrupulous persons, tricksters, and swindlers" did exist, and did endeavour to pass off articles of their own manufacture as of the manufacture of the company. He denied that there was any charge levelled specifically against Mr. Beck, but simply described a class of persons known to exist, and against such class the company cautioned the public.

At this stage of the case,

His Lordship, addressing Mr. Aston, said: You say that this proclamation did not refer to the plaintiff. I should have thought, then, that under the circumstances you would have been willing to express your regret, and let the matter stand over until the trial. There is no one else in Hastings who can hurt you.

Mr. Aston (after a consultation with Mr. Swinfen Eady) said after what had fallen from the Court he felt himself justified in adopting the course suggested by his Lordship. He, however, asked that the plaintiff should be put under an undertaking not to insert advertisements in the newspapers injurious to the defendant company.

Mr. Hastings said he could give no such undertaking.

Mr. Aston thought it would be only fair that such an undertaking should be given.

His Lordship did not see that the plaintiff had done, or threatened to do, anything which called for the Court to put him on any undertaking.

Mr. Aston thought it would be well that the war should cease.

His Lordship did not see that Mr. Beck was issuing or threatening to issue any proclamation.

Mr. Aston should have thought it would be but fair to put him on an undertaking.

His Lordship said if the Hop Bitters Company made out that Mr. Beck was selling his goods as theirs, and he continued to advertise them, the Court would consider that when dealing with the question of damages.

The motion stands over until the trial accordingly.

A CLAIM FOR DAMAGES.

IN the Queen's Bench Division, before Mr. Justice Grove, the case of *Edwards v. Annett* was heard. This was an action brought by William Herbert Edwards against Alfred George Annett for false imprisonment and a malicious charge of embezzlement, and damages were laid at 1,000*l.* There was a counter-claim by the defendant for 77*l.* 12*s.* 3*d.*, made up as follows:—Due on amount to be paid for business, 482*l.*; to stock-in-trade, 182*l.* 3*s.* 10*d.*; fixtures and utensils, 115*l.* 8*s.* 5*d.* Mr. Stephen Lynch and Mr. Richmond were for the plaintiff; and Mr. Willis, Q.C., Mr. Melsheimer, and Mr. E. Marshall Hall for the defendant.

The plaintiff said he lived at 211 Dover Street, and was a registered chemist and druggist. About the month of October, 1883, he entered into the employment of the defendant as chemist's assistant and acting dentist at 157 High Street, Borough. He continued in his employ until the following year, when he entered into negotiations with the defendant for the purchase of the business. A verbal arrangement was come to which culminated in a deed which was executed on May 16, 1884, by which he was to purchase the business for 1,000*l.*, 150*l.* of which was placed to his credit "as to the profits of the business," the remainder being paid by instalments of 5*l.* a week. He continued in possession under the terms of that agreement, and sent monies to the defendant from time to time. Sometimes he would send money once, twice, three, and four times a week, and altogether he paid the defendant 545*l.* These amounts were placed in a small book and receipted by the defendant. That book was produced in the police court, and lost by his (plaintiff's) solicitor, and although he had made every inquiry he had been unable to recover it. He continued on at the shop with more or less success, generally less, when in September or October, 1885, defendant spoke to him about being behindhand with his creditors, and said if he would turn over the management of the business to him (the defendant) he would use his influence with the creditors to induce them not to press for settlement. On October 19 defendant wrote to plaintiff's wife at Sydenham asking her to give up certain augmented expenses incurred by residing at Sydenham. She refused to give that assurance, and plaintiff agreed that defendant should take over the management. Then a deed was executed by Messrs. Taylor & Taylor, solicitors, for plaintiff and defendant, which, witness said, purported to be an assignment of 50*l.* to him deducted from the 500*l.* and upwards owing. Witness never got the 500*l.* The business was carried on under the name of Field & Co., but the dentistry was under witness's name, which appeared on the case, and on two signs outside the shop. After the second deed was executed, witness sent a day's cash up twice a week, deducting enough to live upon. He had deducted from 25*s.* to 5*l.* or 6*l.* a week, and defendant had supplied him with a balance-sheet. When witness entered into the business the lease of the premises had three years to run. In September, 1886, witness applied to the landlord, and got a renewal of the lease. When he told Mr. Annett he was going to apply for the lease, he said, "Get it"; and on September 8 he received a letter from defendant acknowledging receipt of the new lease as further security. He further promised to do his best to sell the business for 1,000*l.*, and pay the balance after all debts had been paid to witness. He also enclosed a form for witness to sign, authorising him to sell the business. On September 13 a policeman went to the shop, and, arresting him, took him to the police station, where he was locked up all night. The next morning he was brought before the magistrate, and remanded. A charge of embezzlement was preferred against him by the defendant, and after several remands he was eventually

acquitted at the sessions. While the criminal proceedings were going on, witness saw defendant, and verbal negotiations were entered into. Defendant said, "I have been rash; you have acted rashly. I am willing to come to terms at this moment if you will come to Messrs. Taylor's offices; conditionally, that you will assist me to sell the business, and receive in the borough a gentleman of the name of Major Hussell. Do your best to effect a sale, and I will pay over to you one-half of the 1,000*l.* purchase-money, if you will not proceed against me for false imprisonment." Certain drafts were prepared by the solicitors, but eventually the negotiations fell through, and the defendant persisted in the charge. During the time he was in custody goods were removed from the shop and taken to the defendant's place of business. Witness demanded the goods. He denied that he had embezzled any of the defendant's money, or that he was his servant at the time. His solicitors' costs for defending him were 79*l.* 12*s.* 4*d.* He had failed to find employment since, as the case got into THE CHEMIST AND DRUGGIST.

Cross-examined by Mr. Willis: In 1883 he accepted a salary of 2*l.* a week and a consideration, viz., to have the whole of the profits of the business over and above 100*l.* which the defendant was to draw. He was a certificated dentist when he went into the defendant's service. He had been in his employ about eight months when the deed of May, 1884, was executed. After May 16 notice was given that things would be ordered to witness's credit from that time forward. In October, 1885, he found himself in difficulties. He was living at Sydenham and was owing 320*l.* to trade creditors. He also owed 18*l.* or 20*l.* in respect to the expenses of his house. He had paid Annett 260*l.* or more pursuant to the agreement, independent of the 150*l.* set off "as to the profits of the business." The stock did not decrease, but increased. Between May, 1884, and October, 1885, witness ordered the goods. After 1885 all the orders were not signed by the defendant for the business in the borough. Witness signed scores and hundreds of orders, and defendant only signed for three firms who allowed credit. They were not the only firms who gave credit; he had dozens of accounts with credit. He did not know that a circular was issued after October, 1885, by defendant to this effect:—"Sir,—I have this day, I beg to inform you, acquired the chemist's business known under the style of Field & Co., Borough Pharmacy." He did not know that circular was sent to the creditors. Annett did not tell him that in future all orders would bear his signature. Defendant did not complain to him that he was taking more than 2*l.* a week. In January he did not say he would go back to 2*l.* a week. He wrote in December, 1886: "Dear Sir,—I am sorry to have to report two bad days' business, but hope the weather will change and improve. I shall be able to manage now with 2*l.* per week, having paid back the loan I had a few weeks ago. That will cut down expenses considerably." He did not recollect what "the loan" referred to. In March he overdraw 2*l.* which he had to pay away, and he wrote to the defendant saying he would take 15*s.* that week and 25*s.* the next week to "square" it up. On April 20, according to the till-book, he took 4*l.* On that day he received 7*l.* from Mr. Bartholomew. That amount was not entered in the till-book. He put that money in his pocket and appropriated it to his own use, because it was his own money.

Was it for work done since October 23, 1886?—Yes; he was entitled to what he wanted from the business, and he took it. Mr. Willis: I know you did. Did you enter Mr. Bartholomew's correct address in the ledger?—Yes. Where is Mermaid Court?—I don't know. That was the address given me by Mr. Bartholomew. That account was not entered in the till-book at all, but it was entered in the dental-book. He could not recollect whether on May 15 he received from Mrs. Lenden 1*l.* 17*s.* 6*d.*, and told her it was not usual to give a receipt. He now recognised Mrs. Lenden, and thought he must have had the money. He receipted a bill for Mrs. Bryant for 2*l.* 15*s.* in August, but could not find the amount in the till-book. Mr. Willis called for the dental-ledger, which was impounded at the sessions. In it was an entry of 2*l.* which looked as if it had been charged 2*l.* 15*s.* He had not very much doubt that he put the money in his pocket. There was no entry for April 24 of 1*l.* received from Mrs. Binyone. He very likely put that money in his pocket, as he had the right to do.

Mr. Willis: That is the question. He wrote to defendant

on September 11, "You will notice there is a deficiency of 3*l.* 5*s.* and 1*l.* 9*s.* for one of the days last week, making 4*l.* 14*s.*" Defendant called that morning. Mr. Willis: Did you between October, 1885, and September, 1886, receive nearly 30*l.* over your 2*l.* a week. Witness: If you say I had a salary of 2*l.*, I must have taken 100*l.* He did not go to the defendant and say his wife was anxious about the prosecution, and he hoped defendant would come to some settlement, and thereupon defendant referred to Messrs. Taylor. He could not say whether he had called on Messrs. Taylor alone. Mr. Willis then read a letter from Mrs. Edwards to defendant in which she said, "She was only too willing to do what he asked. It was not her wish from the first to go to Sydenham, but her husband thought it would be for the best. It made her quite ill to think of the debts belonging to the shop, and thanked him for all his kindness." He had not been in a good position since the prosecution. Mr. Willis: Have you been writing in the name of Graham?—I have. I think you are married?—I am. And have a wife who wrote that kind letter I have just read to you? Now listen—"March 18, 1887. Dear Sir,—I have to ask your consent to my engagement with your daughter. I am happy to state my position you will find satisfactory."

Mr. Lynch: I object.

The Judge: I do not know that it is not admissible.

Mr. Willis: He says his position is destroyed.

Mr. Lynch: I thought a limit had been put to the pillory of the witness-box.

The Judge: If a letter bears upon the question of damages it is admissible.

Mr. Willis: Is there a gentleman whose consent you were asking to an engagement between you and his daughter?

Mr. Lynch: We are not trying a breach of promise.

The Judge: I really cannot help it; it seems to have a very important bearing. He comes here and asks for damages; he says he is ruined, and cannot get a situation in consequence of this charge made against him. Mr. Willis proposes to show he wrote to another person saying his position was satisfactory, in order that the person might accept him as the husband of his daughter. Surely that is most relevant evidence.

Mr. Willis (reading the letter): "My position you will find satisfactory, and shall be pleased to call upon you on my return to town. In the meantime I must ask your consent to our correspondence. Yours faithfully,

"H. GRAHAM."

Witness: I was staying at Dover Street. But why was the letter written from Bridge House Hotel?—Because I had several appointments there, and wrote from there. I went down to Hastings, and that is what I mean by "returning to town." Was your position satisfactory?—Very unsatisfactory. What did you write it for? another untruth?—Defendant: One more to the list, I suppose.

Mr. Willis: And you were married at the time!

Sergeant Rolfe said he received a letter from Mr. Annett, and went to 157 High Street, Borough. He there saw Mr. Edwards, and handed him a letter. He admitted his handwriting, and witness took him into custody for embezzlement of the two sums mentioned. Edwards, replying to the charge, said, "I spent the money, but he cannot charge me. I am a partner; I have an interest for 500*l.* in the business." He was taken to Commercial Road police-station, and brought before the magistrate the same afternoon.

Herbert Hampshire, formerly employed by Mr. Annett at his shop (Messrs. Beedzler & Co's.), 18 Norton Folgate, said when plaintiff was in custody the defendant told him to get away as much superfluous stock as possible. He went through the "slips" with Mr. Annett with a view to proving that Edwards had a salary, as Annett said that was necessary. In doing so they clipped corners off the slips.

The Court then rose for the day.

On Wednesday morning Hampshire was cross-examined by Mr. Melsheimer. On the occasions when the slips were clipped, the charge against Edwards was being heard at the Worship Street Police Court. He remembered meeting the defendant in Battersea at Kempster's. Did not tell him the plaintiff had sold his right to the action. He would swear he never said the plaintiff had sold his right to the solicitor at present acting for him for 5*l.* Believed he had a good character while with Mr. Annett, but a month ago he wrote

to him saying he felt a sense of shame in venturing to address him considering the ungentlemanly actions with which he (the defendant) must couple his name as a late assistant. For this he felt in duty bound to apologise, and thanked defendant for the kind manner in which he had treated him.

Re-examined: That letter referred to something which took place after he left defendant's service. He referred his present employer to Mr. Annett, and he was engaged.

Mr. Lynch then called for the "slips" which plaintiff used to send to defendant with the day's cash. On their being handed to the associate of the Court by the defendant's solicitors, the judge said they ought not to have been in Messrs. Taylor's hands all night.

Mr. Willis offered an apology, and said they were handed from the jury for his inspection, and then unintentionally passed on to the defendant's solicitors.

The Judge: You should have mentioned it to the Court. You see the consequences of it. We have been asked to re-open these things, which have been out of the possession of the Court, to show they were slipped and not ragged. You are departing from the usual forms. The slips are now perfectly useless.

They were, however, examined, and the witness cross-examined with respect to them. This having closed the case for the plaintiff, Mr. Willis submitted there was no case to go to the jury in support of the action. As to false imprisonment, he submitted no evidence had been given upon which the jury could properly come to a conclusion. Rolfe, the police-sergeant, swore he acted on his own discretion, from information received partly from the defendant, and partly from the plaintiff. He cited the case of *Grenham v. Willes*, and contended that when a man was called upon to sign a charge-sheet after a policeman had arrested a person, the signing did not ratify the act of the policeman or make him responsible. On the second point he maintained there must be absence of reasonable and probable cause on the part of the defendant. The judge ruled in favour of Mr. Willis on the first count, but on the second said he should not stop the case from going to the jury.

Charles Taylor, of the firm of Taylor & Taylor, said in October, 1885, he was informed by Messrs. Edwards & Son that Edwards was in hopeless difficulties. A meeting of creditors was suggested, and it was thought that Annett should see the wholesale house. On October 22 he saw plaintiff, who said he had decided to assign the business back to the defendant; and pursuant to instructions received from defendant, witness drafted an assignment. He believed the plaintiff said defendant ought by covenant to pay his debts. Witness replied that he could not advise defendant to legally bind himself to do that, although defendant was morally willing to do so.

At this point the jury made a communication to the judge, to the effect that they would not further trouble the defence. The plaintiff had not satisfied them.

Mr. Lynch said he desired to have an opportunity of asking Mr. Annett one or two questions. He could put a very different complexion on the case.

Witness, continuing, said he had the draft engrossed, and on the next morning the plaintiff called and executed the deed. It was not true that he knew nothing of its contents.

Cross-examined: Plaintiff had no separate advice. Defendant gave 130*l.* for the lease of the premises, over 100*l.* for the fixtures, and then he stocked the shop. The witness was closely examined by Mr. Lynch with a view to showing that with the deed of October, 1885, the defendant drove a very hard bargain with the plaintiff.

Mr. Willis: That is my case.

The Court then adjourned for luncheon, and on re-assembling Mr. Lynch addressed the jury. He said when they sent their intimation to the judge they naturally expected that the facts would be denied on oath by Mr. Annett. But that had not been the case. Facts had not been met by facts, and oaths by oaths, but on the contrary every prejudice had been thrown in his way. The learned counsel having gone through the facts,

The Judge summed up. If the jury's opinion had not undergone a change during the learned counsel's address, the only point left for their decision was whether the prosecution of defendant was instituted maliciously and without reasonable and probable cause. It did not follow that because a man was

acquitted that therefore the prosecutor could be found guilty of malicious prosecution. If that were the case nobody would be able to prosecute anybody. If a man had a fairly good reason to suppose that another had committed a felony, he was bound as a good citizen to honestly and *bonâ fide* institute a prosecution. He would go through the evidence in detail if the jury required it, but he would first ask them whether the plaintiff was not in ignorance of the contents of the deed of October, 1886, and whether the defendant did not purposely slip off the receipts for the purpose of making up a case for himself. If so, then he would be of opinion that there was reasonable and probable cause for the prosecution.

The jury immediately found in favour of the defendant.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds for objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings, London, W.C.

From the "*Trade Marks Journal*," June 2 and 8, 1887.

"MAGNETIC," and other wording, on label; for a magnetic appliance for medical purposes. By K. Annat, 6 Myddleton Road, Hornsey, N. 56,148.

"GLAZINE," and other wording, on label; for a starch gloss. By J. Talbot, Salisbury. 57,223.

Figures of three molar teeth and three daggers, on label; for patent medicines. By Crossley & Wilson, Wigston Fields. 61,123.

"GOLDEN REIGN"; for perfumery. By Breidenbach & Co., 157E New Bond Street, W. 61,197.

"THORNE'S RUBBING-BOTTLE," and other wording, on labels (2); for medicinal preparations. By J. Thorne, 23 Lord Street, Southport. 61,237.

"LIVOZONE"; for patent medicines. By A. S. Barnfather, 9 New Bridge Street, Newcastle-on-Tyne. 61,557.

"NAP," on label; for a botanic beer. By T. W. Lawson, Manchester. 61,620.

"ACCESSION BOUQUET," and other wording, on label; for a perfume. By Bayley & Co., 17 Cockspur Street, London. 61,635.

"SILVERET"; for a plate-powder. By the Nubian Manufacturing Company (Limited), 9 Hosier Lane, West Smithfield. 62,128.

Figure of a dog, on label; for oils (Class 4). By George and James Rawstorn, 79 High Street, Hull. 62,187.

"FERRIS & Co."; for disinfectants and other goods (Class 2), medicines, &c. (Class 3), apparatus (Class 8), and perfumery (Class 48). By Ferris, Boorne, Townsend, and Boucher, trading as Ferris & Co., Bristol. 63,035-37, and 63,041.

"SALVO PETROLIA—PURE VASELINE," with figure of the American eagle between; for an ointment for human use. By the Salvo Petrolia Company, Saltney. 57,231.

Representation of a solar eclipse; for medicines. By J. H. Lewis, 22 Great Portland Street, W. 58,875.

"ALKALINE POWDERS," and other wording, on a four-panelled label; for the same. By Alfred Baker, Jun., trading as R. M. Rew & Co., 273 Regent Street, W. 59,282.

"STODDART'S SOLUBLE SEA SALTS," on label; for the same. By Algernon Warren, trading as A. & J. Warren, Bristol. 59,441.

"ASPINALL'S ENAMEL," in script; for the same. By H. A. Aspinall, trading as Aspinall, Aspinall & Co., Hollydale Works, Peckham. 60,207.

THE NEW JAPANESE PHARMACOPŒIA.

By S. M. SUZUKI, M.R.C.S., Eng., &c.

As long ago as 1875 the compilation of an official Pharmacopœia was talked of, owing to the inconveniences which have existed in Japan of there being no official standard for medicines. The chemists obtain their drugs from England, the United States, France, and Germany, or prepare them according to their respective Pharmacopœias, and, as the preparations vary considerably in strength, much confusion has long been experienced. At the close of 1880 the Japanese Government decided to compile a Japanese Pharmacopœia, and a committee of seventeen was appointed by the Central Sanitary Board of the Home Department for that purpose. This committee has held 60 formal, 3 extraordinary, and 92 private meetings within the period during which the work was in process of compilation and revision.

It was finally approved of and officially notified by the Home Minister of the Japanese Government on June 25, 1886, to come into use from July 1, 1887. The work was written in German originally, as most of the members of the committee understood that language, but the Japanese is to be considered the official text.

In form it resembles the British and German Pharmacopœias, and is divided into the following parts:—(1) The Preface; (2) the Pharmacopœia; and (3) an Appendix.

In the Preface the following points are stated:—

1. The Japanese Pharmacopœia will be translated into Latin besides the Japanese, so that it may be used in foreign countries.

2. Whether written in Latin or Japanese the names of medicines will be arranged in alphabetical order.

3. For chemicals, those Latin names will be used which agree with the terms generally used in modern languages, avoiding as far as possible peculiar chemical terms.

4. The process of manufacture will not be described unless it is necessary to decide upon a fixed method of preparing the medicine.

5. When the process of manufacture is not mentioned, there must be such provision as to certify that it is the right medicine, and that there are no foreign ingredients, by giving the property and its reaction; but if its nature is certain from its name, then its property and reaction will not be mentioned.

6. The mode of preserving medicines will only be mentioned when special care is needed.

7. Weights and measures given in the Pharmacopœia will be according to the metric system and the temperature according to the Centigrade thermometer.

The Pharmacopœia contains 475 articles, nearly all of which are official in either the British, German, or United States Pharmacopœias, upon which works the Japanese is based. Each article is given in the order of its name alphabetically in Latin, the Japanese name precedes, and its Latin equivalents follow in italics. The proportion of each ingredient is given in cases of all compounds, and a description of the article—its appearance, taste, test, and method of preparation.

In the Appendix the following are given:—

a. General rules for manufacture, testing, and preservation of medicines, such as extracts or syrups.

b. Names of reagents for qualitative examination.

c. Names of reagents for quantitative examination.

d. (Table I.) Medicines which ought to be kept in a dispensary; such medicines will be distinguished by the mark O.

e. (Table II.) Medicines which ought to be kept with special care and distinguished from each other.

f. (Table III.) Medicines which ought to be kept with care and distinguished from others.

g. (Table IV.) Maximum dose at one time, or in one day, allowable for an adult person. Unless mark ∇ is put under the names of medicines, physicians ought not to give more than that quantity.

h. (Table V.) Shows the differences in the solubility of medicines at temperatures between 10° and 30° C.

i. (Table VI.) Shows the principal chemical elements and their atomic equivalents, for convenience in test.

Directions for reading the Pharmacopœia:—

1. In this work the words "so many parts" are to denote weights.

2. In showing the proportion of liquor, when it is written thus: (1-10) (1-20), it denotes that 10 or 20 parts of liquor contain one part of medicine, but it is only the probable proportion.

3. In this Pharmacopœia 15° Centigrade is taken as the standard temperature.

4. When "water" is mentioned in regard to the chemical tests of medicines, it always means distilled water.

5. About examining medicines: when no liquid is mentioned for the solution of the medicine, it should be understood that reference is made to an aqueous solution; and for convenience there may be cases where simply the names of soluble medicines are mentioned, and the word "soluble" omitted.

6. The process of "cooling" is effected at 15° to 25° C., and "warming" at 35° to 45° C.

7. In putting up medicines which should be kept from the sunlight, black or dark brown bottles must be used.

8. In the Pharmacopœia, unless specially mentioned, all raw medicines are to be in the dry state; and although the drying process may vary, the temperature must not exceed 40° C.

The following is a list of articles mentioned as official in the work; those in italics being synonyms, and words in brackets are the terms employed in Britain:—

Acetum purum	Aqua fœniculi
" scillæ	" Goulardi
Acidum aceticum	" menthæ
" " dil.	Argenti et kali [potassii] nitras
" " glaciale	" nitras
" arseniosum	" " fusus
" benzoicum	Argilla pura
" boricum	Arnice flores
" carbolicum	" radix
" " crudum	Arcinii iodidum
" chromicum	Asafœtida
" citricum	Atropini sulphas
" hydrochloricum	Aurantii cortex
" muraticum	" flores
" hydrochloric. crudum	Balsamum copaivæ
" muraticum crudum	" dipteroearpi
" hydrochlor. dil.	" Peruvianum
" muratic. dil.	" toltanum
" nitricum	Belladonna
" " dil.	Benzinum petrolei
" " fumans.	Benzoe
" phosphoricum	Bismuthi subnitras
" salicylicum	Bolus alba
" sulphuricum	Bromum
" " crudum	
" " dil.	Calamus
" sulphurosium	Calci carbonas precipit.
" tannicum	" hypophosphis
" tartaricum	" phosphas precipit.
Adeps	" sulphas ustas
Æther	Calomet
Alœ	Calx
Althæa	Calcaria usta
Alumen	Calx chlorata
" exsiccatum	Camphora
Alumini et kali [potassii] sulphas	" monobromata
Alumini et kali [potassii] sulph. exsic.	Cannabis indica
Ammoniacum	Cantharis
Ammonii carbonas	Capsule copaivæ
" chloridum	Carbo ligni
Amygdala amara	" ossium
" dulcis	" " purificatus
Amyl nitris	Cardamomum
Amylum	Carrageen
Antidotum arsenii	Caryophyllas
Apomorphini hydrochloras	Cascarilla
Aqua	Catechu
" ammoniæ	Cera flava
" " fortior	Certi oxalas
" amygdalæ amaræ	Cetaceum
" aurantii florum	Cetraria
" calcis	Chamomilla
" carbolisata	Charta cantliaridis
" chlorata [chlorine water]	" nitratis
" chlori	" s'napis
" cinamomi	Chinidini [quinidinæ] sulphas
" destillata	Chiniui [quininæ] hydrobromas

Chinini [quininæ] hydrochloras	Gossypium depuratum	Magnesi citras efferv.	Pulvis infantum
" " sulphas	" stypticum	" oxydum	" magnesie et rhei
Chininum [quinina]	Granatum	" sulphas	Quassia
Chinoidinum [quinoidina]	Gnalaicum	Mangani oxydum nigrum	Resina guaiaci
Chlorali hydras	Gummi arabicum	Manna	" jalapæ
Chloroformum	Guttapercha	Matico	" pini
Chrysarohium	Hirudo	Mel	Rhamnus
Cina	Hordeum	" depuratum	Rheum
Cinchona	Hydrargyri chloridum	Mentha	Saccharum
Cinchonidini sulphas	" iodidum	Mercurius sublimatus corrosiv.	" lactis
Cinchonini hydrochloras	" oxydum flavum	" precipitatus albus	Sal carolinum facticum
" sulphas	" " rubrum	Morphini hydrochloras	" seignetti
Cinnabar	" perchloridum	" sulphas	Salep
Cremor tartari	" " ammonia.	Morm	Salicinum
Calabar	" periodidum	Moschus	Salvia
Cinnamomum	" sulphidum rubrum	Mncilago gummi arabici	Samhucus
Codeinum	Hydrargyrum	Myristica	Santalum
Coffeinum	Hyoscyamus	Myrrha	Santoninum
Colchicum	Ichthyocola	Natrii [sodii] acetas	Sapo jalapinus
Colloidum	Infusum rhei	" " benzoas	" kalinus [sapo mollis]
" cantharidatum	" sennæ compositum	" " bicarbonas	" medicatus
" elasticum	Iodoformum	" " horas	Sarsaparilla
Colocythis	Iodum	" " carhouas	Sassafras
Colombo	Ipecacuanha	" " " crudus	Scilla
Crocus	Jaborandi	" " sicens	Secale cornutum
Cubeba	Jalapa	" " chloridum	Senega
Cupri alumen	Juiperus	" " phosphas	Senna
" sulphas	Kalii causticum [potassæ hydras]	" " salicylas	Sinapis
Digitalis	" [potassii] acetas	" " sulphas	Spiritus
Electuarium scure	" " bicarbonas	Nuc vomica	" æthercus
Emplastrum adhesivum anglicum	" " bitartas	Oleum amygdalæ ætherenum	" æthyl nitritis
" belladonnæ	" " bromidum	" " expressum	" ætheris nitrosi
" cantharidis	" " carbonas	" " aurantii corticis	" ammoniæ aromat.
" gummosum	" " " crudus	" " florum	" " fœniculæ
" hydrargyri	" " chloras	" cacao	" aromaticus
" opii	" " et natrii [sodii]	" cajeputi	" camphoræ
" plumbi	" " tartas	" caryophilli	" chloroformi
" resine	" " iodidum	" cinnamomi	" cinnamomi
Eleosaccharum	" " nitras	" crotonis	" dilutus
Ergota	" " permanganas	" encalypti	" fœniculi
Eserini salicylas	" " sulphas	" fœniculi	" juniperi
Eucalyptus	" " sulphidum	" jecoris	" lavandulæ
Extractum aloës	" " tartas	" juniperi	" limonis
" belladonnæ	Kamala	" lavandulæ	" menthæ
" cannahis indicæ	Kino	" limonis	" Mindereri
" cascarillæ	Kouso	" liui	Spongia
" cinchonæ	Kreasotum	" menthæ	" compressa
" colocythidis	Lactucarium	" olive	Stibii et kalii tartas [antimonium tartaratum]
" colombo	Laudanum liquidum Sydenham	" ricini	" [antimonii] oxydum
" ergotæ	Lapis infernalis	" rose	" sulphidum aurat.
" secalis cornuti	" divinus	" rosmarini	Sulphur auratum antimonii
" filicis	Lini farina	" sesami	Strychni semen
" gentianæ	" semina	" siuapis æthereum	Strychni nitras
" glycyrrhizæ	Liuimentum ammoniæ	" terebinthinæ	Styrax liquidus
" " venale	" belladonnæ	Opium	Succus liquiritiæ
" granati	" calcis	Opodeldoc	Sulphur depuratum
" hyoscyami	" saponis liquid.	Paraffium	" precipitatum
" opii	Liquor ammonii caustici	Pepsinum saccharatum	" sublimatum
" physostigmatis	" " acetatis	Phosphorus	Syrupus althææ
" pomi ferratum	" arsenii et hydrargyri iodidi	Physostigma	" aurantii corticis
" rhei	" Donovanii	Physostigmini salicylas	" " florum
" strychnii	" calcis	Pilocarpi hydrochloras	" ferri iodidi
" nuclei vomice	" ferri citratis	Pilule aloës	" ipecacuanhæ
" taraxaci	" " perchloridi	" " et ferri	" mori
Ferri citras	" " persulphatis	" colocynthidis et hyoscyami	" opii
" et ammonii citras	" guttaperchæ	" ferri iodidi	" rhei
" " cbiuini [quininæ] citras	" Hoffmanni	" " valleti	" sacchari
" " kali [potassii] tartas	" kalii [potassii] arsenitis	" hydrargyri	" sarsaparillæ co.
" iodidum saccharatum	" Fowleri	" rhei	" senegæ
" lactas	" natri chlorati [sodæ chlorati]	Pix liquida	" sennæ
" perchloridum	" " plumbi dilutus	Plumbi acetas	" simplex
" subcarbonas	" " subacetatis	" carbonas	" toltanus
" sulphas	Lithargyrum	" oxydum	" ziugiberis
" " crudus	Litbii carbonas	Podophyllinum	Tamariudus
Ferrum pulveratum	Lohelia	Pulvis ærophorus	Taraxacum
" redactum	Lupulinum	" " anglicus	Tartarus emeticus
Filix mas	Lycopodium	" antacidus	Terebinthina
Fœniculum	Magisterium bismuthi	" aromaticus	Thymol
Galbanum	Maguesii carbonas	" Doveri	Tinctura acida aromatica
Galla		" ipecac. et opii	" aloës
Gentiana		" gummosus	" " co.
Glycerinum			
Glycyrrhiza			

<i>Tinctura amara</i>	<i>Trochisci ferri lactatis</i>
" <i>arnicæ</i>	" <i>ipeacacuanhæ</i>
" <i>aromatica</i>	" <i>kalii [potassii] chloratis</i>
" <i>asafetidæ</i>	" <i>natrii [sodii] bicarbonatis</i>
" <i>aurantii</i>	" <i>santonini</i>
" <i>belladonnæ</i>	
" <i>benzoës</i>	<i>Unguentum belladonnæ</i>
" <i>cantharidis</i>	" <i>cantharidis</i>
" <i>cascarillæ</i>	" <i>diachylon</i>
" <i>catechu</i>	" <i>glycerini</i>
" <i>cinchonæ</i>	" <i>hydrargyri</i>
" <i>cinnamomi</i>	" " <i>oxydi flavi</i>
" <i>colchici</i>	" " <i>rubri</i>
" <i>colocythidis</i>	" <i>kalii [potassii] iodidi</i>
" <i>croci</i>	" <i>plumbi subacetatis</i>
" <i>digitalis</i>	" <i>simplex</i>
" <i>encalypti</i>	" <i>stibiatum [antimoni]</i>
" <i>ferri æthereæ</i>	" <i>tartarati</i>
" <i>gallæ</i>	" <i>sulphuris</i>
" <i>gentianæ</i>	" <i>zinci oxydi</i>
" <i>gualiaci</i>	<i>Uva ursi</i>
" <i>jalapæ</i>	<i>Valeriana</i>
" <i>iodi</i>	<i>Vaselinum</i>
" <i>ipeacacuanhæ</i>	<i>Veratrinum</i>
" <i>lavandulæ co.</i>	<i>Vinum amarum</i>
" <i>lobeliæ</i>	" <i>cinchonæ</i>
" <i>myrrhæ</i>	" <i>colchici</i>
" <i>nervini Bestnacheffii</i>	" <i>ferri</i>
" <i>opii</i>	" <i>ipeacacuanhæ</i>
" " <i>benzoica</i>	" <i>opii crocatum</i>
" <i>pomi ferrata</i>	" <i>pepsini</i>
" <i>quassia</i>	" <i>stibiatum [antimoniale]</i>
" <i>rhei</i>	" <i>stibi et k'ä'ä tartratis</i>
" <i>strychni</i>	<i>Zinci chloridum</i>
" <i>nucis vomicæ</i>	" <i>oxydum</i>
" <i>valerianæ</i>	" <i>sulphas</i>
" <i>zingiberis</i>	<i>Zingiber</i>
<i>Tragacantha</i>	
<i>Trochisci acidi tannici</i>	

The following is an abstract from Dr. Whitney's "Notes on the History of Medical Progress in Japan":—

The earliest records of Japan mention only 37 medicines as being employed in the period of the so-called "divine age" of Japanese history, before the seventh century B.C.

The names of medicines shown in the Kō-oku Iji-yen Kaku-sho-shi are the following—

<i>Scutellaria macrantha</i>	<i>Plantago japonica</i>
<i>Ligusticum acutifolium</i>	<i>Cuscuta japonica</i>
<i>Pæonia albiflora</i>	<i>Potamogeton polygonifolius</i>
<i>Platycodon grandiflorum</i>	<i>Phytolacca acinosa</i>
<i>Sophora angustifolia</i>	<i>Panax ginseng</i>
<i>Rehmannia lutea</i>	<i>Conioselinum univittatum</i>
<i>Pinellia tuberifera</i>	<i>Citrus fusca</i>
<i>Arctostaphylos ovata</i>	<i>Angelica anomala</i>
<i>Xanthoxylum alatum</i>	<i>Forsythia suspensa</i>
<i>Pachyma cocos</i>	<i>Roxburghia sessilifolia</i>
<i>Phellodendron amurense</i>	<i>Artemisia capillaris</i>
<i>Vitis serjaniifolia</i>	<i>Dendrobium moniliforme</i>
<i>Angelica inæqualis</i>	<i>Gall of the bear</i>
<i>Pteris sibirica</i>	<i>Hoof of the hog</i>
<i>Asarum sieboldi</i>	<i>Pardanthus chinensis</i>
<i>Acorns gramineus</i>	<i>Brinnella vulgaris</i>
<i>Kadsura japonica</i>	<i>Zingiber officinale</i>
<i>Coptis anemoneifolia</i>	<i>Allium odorum</i>
<i>Selinum japonicum</i>	

The first trace of ancient pharmaceutic art in Japan is found in the following extract from the Kōji-ki, or Ancient Records, a work compiled in the seventh century A.D. from ancient manuscripts and verbal traditions extending back into the "divine age" above mentioned, wherein it is related that O-na-muchi-no-mikoto, the god to whom were entrusted the affairs of the land, and who is looked upon in Japan as the god of medicine, "coming one time upon a hare lying upon the ground and weeping with pain, whose clothing had been stripped off by a crocodile, and whose skin had split by reason of a wetting with salt water and exposure to the heat of the sun, directed the hare as follows:—'Go quickly now to the river-mouth, wash thy body with fresh water, then take the pollen of the sedges growing at the river-mouth, spread it about, and roll about upon it, whereupon thy body will certainly be restored to its original state,' following which directions the hare quickly recovered.

On another occasion O-na-muchi-no-mikoto himself became the subject of medical treatment, the story of which, as related in the Kōji-ki, is as follows:—The eighty deities, the brethren of O-na-muchi-no-mikoto, desiring to slay him, because of the preference of the Princess Ya-kami for him, having counselled together, said to him: "On this mountain there is a red boar. So when we drive it down, do thou wait and catch it. If thou do not wait and catch it, we will certainly slay thee." Having thus spoken, they took fire and burnt a large stone like unto a boar, and rolled it down. Then as they drove it down and he caught it, he got stuck to it and burnt by the stone and died. Thereupon her augustness his august parent cried and lamented, and went up to heaven and entreated His divine-producing-wondrous-augustness, who at once sent Princess Cockle-shell and Princess Clam to bring him to life. Then Princess Cockle-shell triturated and scorched her shell, and Princess Clam carried water and smeared him as with mother's milk, whereupon he became beautiful and wandered off.

Since the introduction of Chinese medicine into Japan in the early part of the Christian era, Chinese materia medica and pharmacy were studied and practised by the physicians of Japan. The following are a few examples of remedies of those days and the mode of their preparation:—

Shin-sen-chinja-guran, or the heavenly-mountain-sprite chinja-pellets, which contains myrrh, dolmonorops draco, musk, cinnabar, inula helinum, and liquorice. These should be reduced to powder. The liquorice should be boiled until it becomes glossy, then mixed well and made into small pellets, one of which is a dose, and should be masticated well and swallowed with a draught of a decoction called Kyō-yen-to, or ginger and salt decoction.

To-shi-shi-yen is composed of *cuscuta japonica*, *rokujo*, cinnamon, *ranunculus scleratus*, *aconitum Fischeri*, *alutma* plantago, 8 oz. each; *hageki*, *siler divaricatum*, *cynomorium*, *eunonymus japonicus*, *feniculum vulgare*, *agularia agallocha*, *pachyma cocos*, *dendrobium moniliforme*, *lamium album*, *cornus officinalis*, *psoralea corylifolia*, *rehmannia lutea*, *cubeba*, about one scruple each; *sohyōshō*, *kazura japonica*, *rubus tekkura*, *conioselinum univittatum*, 4 oz. each. These substances are to be reduced to a powder, moistened with sake (a kind of rice-wine containing about 16 per cent. of alcohol), and made into a paste with wheaten flour. The paste is then made into pellets of the size of the seed of the *elaeococca verrucosa*. These pellets are to be taken with warm sake or hot solution of salt.

This compound is used in the following disorders: Disease of the kidneys; in the five kinds of consumption of the lungs; the seven kinds of fever; in spasm of the smaller intestines; irritating pain in the four extremities; when the face is jaundiced; when there is dryness of the tongue or lips; amblyopia, tinnitus aurum; in palpitation of the heart, or excitement of the mind; in nightmare, or sudden fright; when suffering from mental prostration; in sudden joy, or anger; when one is melancholy, and takes delight in nothing; when food seems tasteless, and water does not refresh; when there is dropsy of the heart and abdomen, paralysis, or weakness of the legs and knees, turbidity and frequency of the urine; impotency, eczema of the thighs, dysuria, stricture, bloody urine, or incontinence.*

Kikoku-San is a remedy used in intermittent fever. It is composed of *panax ginseng*, 4 oz.; *oriza japonica*, *pachyma cocos*, cinnamon, liquorice, 8 oz. each.

Gohō-San contains the following:—*Aquilaria agallocha*, *eugenia caryophyllata*, *inula helinum*, *olibanum*, and betony; equal weights of these substances are boiled in a cotton or raw-silk bag. It is stated that it is better to employ musk instead of the betony. This Gohō-San has been mostly used, it is said, by the physicians of more recent times for diseases of children. In the "Wa-zai hō" it is stated that this medicine depresses or elevates the several ki, or spirits, and restores to health the organs of the San-shō; also removes obstructions, dissipates evil fevers and the bad influences of the pent-up spirits of the In and Yō; also the poisons of various fevers, pains of boils, and the glandular swelling of scrofulosis.

Rengyō-tō, or compound decoction of Rengyō, is composed of the following substances:—*Forsythia suspensa*, *cannabis* sp., saltpetre, about 64 grains each; *ginseng* sp., *pæonia albiflora*, *vitis serjaniifolia*, *Boi*, *pardanthus chinensis*, 51 grains each; *rheum undulatum*, 70 grains; liquorice, 38 grains; and

seed of sour plum, 80 seeds. These substances are to be placed in about 4½ gallons of water, and boiled until but 1½ gallon remains. This compound decoction is used to cure mastitis following parturition, and also in the treatment of carbuncle.

Of a later day, about 1764, Mr. Hanaoka, a famous surgeon of the old Japanese school, taught the following doctrines:—"There is no distinction in principle between ancient and modern medical treatment, while in the treatment of internal and external disease the principle is one. If, therefore, we permit ourselves to be biased towards the teachings of the ancients, we may fail to understand those of the men of to-day; while if we do not consider the internal condition of the body, how can we treat understandingly those diseases which manifest themselves externally? The Dutch physicians are most minute in theory, but rough in their mode of treatment. Chinese and Japanese science is indeed minute, or accurate, in practice; but is restrained by the theories of the past. Therefore, as to treatment, I look to the living body alone for indications, seeking for the mode, afterwards, from philosophers, and am consequently not restricted to rules in giving remedies, but act as necessity demands. When medicines are ineffectual, as well as acupuncture and the cautery (moxa), the abdomen and back may be opened, the stomach and intestines washed, and whatever is likely to save the patient may be done."

In attempting such bold surgery, he employed a narcotic composed of the following ingredients:—*Datura alba*, *aconitum*, *angelica anomala*, *ligusticum acutilobum* and *coniseolum univittatum*. A decoction of these five substances reduced to minute powder was administered to the patient, who at once became unconscious; whereupon the operation was performed. Among the different kinds of surgical diseases operated for, and which other surgeons could not treat, are mentioned:—*Carcinoma mammae*, necrosis of bones, fistula ani, scrofulosis, and benign tumours. Such operations were performed at one sitting, the after-treatment being hot water and a plaster.

The first school of European medicine, or rather of surgery, in Japan was that known as the *Nam-ban-riū*, or School of the Southern Barbarians (Portuguese), and was founded by those surgeons who practised their art according to the teachings of the Portuguese physicians, who had come to Japan in the trading ships during the time in which their countrymen were permitted to carry on trade with Japanese, and more especially between the years 1542–80.

Towards the close of the sixteenth century the Dutch made their appearance in Japan; and after the establishment of the factory at Nagasaki in 1641 Dutch physicians gave instructions in Western practice of surgery and medicine. This event gave rise to a Dutch school of surgeons, to which Japan owes a great debt, and of the untiring and self-sacrificing zeal of the followers. It is stated that, as the Dutch employed remedies which could not generally be obtained in Japan, other remedies obtainable in Japan were substituted in practice.

Considering the severity of the restriction placed by the Government of the Shogun upon intercourse between foreigners and Japanese in the sixteenth and seventeenth centuries, it is not surprising that the study of foreign languages, as well as the study of Western medicine, made but little progress in Japan during the century following the advent of Dutch subjects at Nagasaki, and during the period of their restricted communication with the people of Japan. Indeed, it was not until towards the close of the second century, after the event just mentioned, that the real and lasting foundation of a school of Western medicine and surgery was laid down. In 1858 those physicians who follow Western medicine founded a society in Tokio with the object of establishing an institution for vaccination, which proved a success, and out of which grew the present medical department of the University of Tokio. In September, 1867, the *Tai-byō-in*, or Great Hospital, was established in Tokio, and to this the Medical College was united. In April, 1870, the *Tai-byō-in* with its medical college was organised under the University of Tokio. Ever since the medical education of Japan under the European system became speedily improved, and is progressing interruptedly.

The manufacture and sale of medicines is controlled by certain laws, relating especially to the more poisonous remedies, or to the adulteration of substances used as medicines, for the supervision of which Government laboratories

have been established at Tokio, Yokohama, Osaka, and Nagasaki, where certain imported drugs and medicines, as well as certain of those of home manufacture, which are either poisonous in their nature or are liable to be counterfeited or adulterated, together with all patent medicines, are submitted to chemical examination and analysis, and if found to be pure, or, in case of patent medicines, if non-injurious, are stamped by the office as "allowed for medical use" or permitted to be sold without the stamp.

Manufacturers of medicines, as well as druggists and apothecaries, and all those who sell patent medicines, are required by law to obtain licences for the same; and in case of the latter a separate licence or permit is necessary for each patent medicine offered for sale.

Patent medicines are subject to a stamp duty of ten per cent. of the price at which they are sold at retail, and this price must be plainly stamped on each package.

VASELINE.

By C. ENGLER and M. BOEHM.

THE authors call vaseline the substance extracted from petroleum residues, whilst the mixture of heavy mineral oil (*Paraffinum liquidum*) with ceresin (*Paraffinum solidum*) is regarded as "artificial vaseline." For the preparation of the natural product, two Galician oils were used. Both oils were highly dichroic, had a green colour by reflected light, and a colour varying from yellowish to brownish-red by transmitted light. Their sp. gr. at 15° C. were (I.) 0.812 and (II.) 0.820. In the case of I. 62 per cent. distilled below 200°, while II. gave 71 per cent. of distillate below the same temperature.

For the production of vaseline from these oils, two methods were employed, the first consisting in dissolving the residues in petroleum spirit, bleaching the solution by filtration through animal charcoal, and expelling the solvent by distillation with steam, whilst the second method involved bleaching the oil and subjecting it to distillation in a vacuum at 250°. The product obtained according to the first process formed a colourless, translucent pasty mass melting at 32° and exhibiting no crystalline structure, even on application of cold. The vaseline extracted from the bleached oils was colourless, translucent, and free from odour. It had the following properties:—

	Yield	Sp. gr.	Melting-point
I. ..	13.8	0.8809	30–31°
II. ..	13.2	0.8785	30–31

The vaselines obtained by both processes were found to contain only carbon and hydrogen, both oxygen and sulphur being absent. The bleaching process appears to remove all oxygenated constituents and increases the amount of saturated hydrocarbons, the charcoal retaining the less highly hydrogenised hydrocarbons. Attempts were made to increase the melting-point of vaseline by subjecting it to partial redistillation. It was not, however, possible to raise the melting-point more than two or three degrees, whilst prolonged distillation resulted in reducing the melting-point, probably owing to decomposition. By dissolving vaseline in ether and subjecting the ethereal solution to fractional precipitation with alcohol, the authors succeeded in separating a solid and liquid substance from vaseline. One hundred grammes gave 40.8 grammes of solid vaseline of 0.8836 sp. gr., melting at 40°, and 59.2 grammes of liquid vaseline of 0.8809 sp. gr., solidifying at –10°. Both products had the same constitution and approximately the same boiling-points. American vaseline, melting at 32–33°, yielded 14 per cent. of solid vaseline, melting at 49–50°, and 86 per cent. of liquid vaseline. It is possible to separate "artificial vaseline" into a solid and liquid substance, but the chemical and physical properties of the component parts are essentially different.

[On the Continent the word "vaseline" is used indifferently for all petroleum products which are used as unguents, and it has also been applied to the heavy oils which are used for subcutaneous injections. In this country, however, the Chesebrough Company have the exclusive right to the use of the word for these purposes.—ED.]

THE NEW COINS.

IN commemoration of the Jubilee some new coins have been prepared at the Mint, and are to be issued on June 21. A new effigy of her Majesty, modelled from life by Mr. J. E. Boehm, is to take the place on all coins of the somewhat juvenile portrait which has done duty since 1837, and which was the design of Mr. William Wyon, R.A., Modeller and Engineer of the Mint.

In the new effigy Her Majesty appears crowned and veiled, with the Riband and Star of the Garter and the Victoria and Albert Order. The legend, "Victoria Dei Gratia Britanniarum Regina, Fidei Defensor," is variously arranged on the different coins, according to the exigencies of the design on each.

The opportunity has at the same time been taken, with Her Majesty's approval, for making certain alterations in the designs for the reverses of some of the coins by abandoning those which did not appear to possess sufficient artistic merit to warrant their retention. The reverse of the sovereign will still bear the design of St. George and the Dragon, by Pistrucci, first adopted for the sovereigns of George IV., and the reverses of the half-sovereign and threepence remain unchanged, except that the crown has been assimilated to that used for the new effigy. The St. George and the Dragon design will be resumed for the five-pound piece, the double-sovereign, and the crown, this design having been adopted for these pieces when originally struck. The half-crown will bear the same reverse as that coin bore when first issued, a design of considerable merit by Merlin. During the last



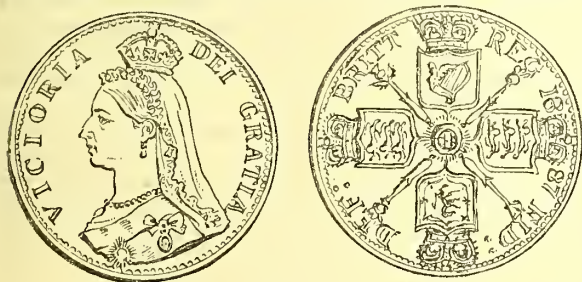
SHILLING.

HALF-CROWN.

SIXPENCE.

half-century public taste appears to have been satisfied, both in this country and abroad, with some such insignificant design as a wreath surrounding words or figures indicating the value of the coin, and the shilling and sixpence have during the present reign been examples of this treatment. They will in future, like the half-crown, bear the Royal arms, crowned, and surrounded by the Garter.

One addition will be made to the coins now in circulation by the issue of a double-florin, the reverse and obverse of which are shown below. The reverse is composed of crowned shields, bearing the arms of the United Kingdom arranged in



DOUBLE-FLORIN.

the form of a cross between sceptres, a device which was first adopted for coins of Charles II. It was designed by Thomas Simon, the greatest of all English engravers, and it remains to be seen whether this handsome coin will be generally popular. The reverse of the florin will for the future bear the same design.

The fiftieth anniversary of her Majesty's accession is besides to be commemorated by the issue of a medal. The effigy for this medal, which is also from a medallion by Mr. Boehm, has a somewhat more ornate veil than that on the

coin, and on the bust, in addition to the Victoria and Albert order, is shown the badge of the Imperial order of the Crown



JUBILEE MEDAL (face).

of India. The reverse, designed by Sir Frederic Leighton, President of the Royal Academy, is thus described:—"In the centre a figure representing the British Empire sits enthroned, resting one hand on the sword of Justice, and holding in the other the symbol of victorious rule. A lion is seen on each side of the throne. At the feet of the seated figure lies Mercury, the God of Commerce, the mainstay of our imperial strength, holding up in one hand a cup heaped with gold. Opposite to him sits the Genius of Electricity and Steam. Below, again, five shields banded together



JUBILEE MEDAL (reverse).

bear the names of the five parts of the globe, Europe, Asia, Africa, America and Australasia, over which the Empire extends. On each side of the figure of Empire stand the personified elements of its greatness—on the right (of the spectator) Industry and Agriculture—on the left, Science, Letters and Art. Above, the occasion of the celebration commemorated is expressed by two winged figures representing the year 1887 (the advancing figure) and the year 1837 (with averted head), holding each a wreath. Where these wreaths interlock the letters V.R.I. appear, and over all the words 'In Commemoration.'

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EDITORIAL NOTES.

PROFESSOR MACLAGAN'S REPORT.

THE report which was submitted to the Pharmaceutical Council last week of the examinations conducted by the Board of Examiners for Scotland necessarily contains much which is similar to the contents of the reports of Dr. Greenhow, published in this journal of April 9. It is understood that the Edinburgh candidates are far from being indigenous, about one-half of them travelling from the South. The mass of raw material with which the Scottish examiners have to deal is, in fact, of a more composite character than what comes before the London Board. There are the natives pure and simple; students from the North of England, who naturally take the nearest centre; and those from farther south, who are either attracted to Edinburgh or repelled from London. We can gather little instruction from the results shown by such a lot as this. Half a dozen hopelessly bad and chronic candidates appearing quarterly, year after year, have a tendency to create a false impression regarding the qualifications of a few hundred candidates, and to give ground for the statement that pharmaceutical education is quite out of joint. This is a fact which the Government assessors do not take into account. The Edinburgh Board during the three years covered by Prof. Maclagan's report examined 522 Minor candidates. Of these 234 passed, and that number represents 234 individuals. The rest, viz. 287, failed, but this represents 287 failures, not 287 individuals. The number contains many who have failed twice, three times, or even oftener, in the course of the three years, and whose continued presence amongst the candidates lowers the apparent qualification of the whole number. We call attention to this point because it is on the proportion of failures that Prof. Maclagan makes certain recommendations, and the curriculum proposals have a similar basis. We should like to see an annual report by the Registrar of the actual number of individuals examined in the course of the year, showing the number who have passed at the first attempt, and the numbers who have failed once, twice, or oftener, in the course of the year. At the present time such a return for the last five years would be of peculiar interest, and should, indeed, have been submitted before the Pharmacy Bill was produced; it would show our legislators exactly how the case stands for or against a curriculum.

Professor Maclagan makes a suggestion regarding the Minor examination which would have a tendency to decrease the number of failures annually by relegating them to a longer interval of study, say six months instead of three. This is the custom of some medical examining boards. There is a practical difficulty in carrying it out in the pharmaceutical examinations, owing to the fact that the Edinburgh Board meets once every three months, and the London Board six times a year, so that a candidate may at present be examined four times a year in Edinburgh, but only three times a year in London. In the latter case, if a candidate at the February examinations were sent back to his studies for six months he could not again appear until October, or after an interval of eight months. If, however, the first examination of the year were held in January, there would be a six months' interval possible from the date of any of the other

examinations. Professor MacLagan hopes, by remitting unfortunate candidates to a longer period of study, "to diminish the supply of chemists and druggists required for the wants of the country." The argument is not quite clear, unless he means that the period of remission is equivalent to expulsion from the drug trade. There is one curious fact brought out by the report which should be noticed. Although the failures in individual subjects are fewer, except in dispensing, the percentage of failures on the whole is higher than hitherto. This shows that failures on account of general deficiency are more numerous. Assuming that the percentages in the report are based upon the total number of failures, the following shows the percentage of failures in the respective subjects of the Minor in Edinburgh and London during 1883-5:—

Subject	Edinburgh	London
Botany	16.30	8.07
Chemistry	14.90	19.43
Materia medica	5.90	5.90
Prescription reading	3.10	12.45
Dispensing	16.30	26.77
Pharmacy	4.50	9.09

The most striking fact about these figures is the great deficiency of Edinburgh candidates in botany, and their great superiority to London candidates in all other subjects but materia medica. Professor MacLagan notes distinct improvement in the scientific subjects, but he has committed himself so strongly to the curriculum that he must wait another three years before he is certain that the improvement is a substantial promise of better things. It is rather significant that the reports of both the Privy Council representatives clearly prove this one point—that the scientific education of young pharmacists is steadily advancing. To whip on the animal which progresses steadily, if not hastily, is, to say the least, a questionable policy. It seems likely, moreover, that the improvement in education is due to a gradually-increased stringency of the examination. Of late years the examiners have aimed higher, and candidates have felt it necessary to do the same. This practice is very hurtful to students who stick to the syllabus, but as 90 per cent. of them take as their guide the experience of those who have gone through the mill, they extend their studies far beyond the printed official requirements. We must, one of these days, prepare a genuine syllabus for the benefit of students. The official one is a bit of a fossil. It will be observed that the failures in dispensing in Edinburgh are 10 per cent. lower than they are in London. In Edinburgh the candidates get more work to do than in London. This would seem to prove, therefore, that Dr. Greenhow is right in advising an extension of time and work in this subject. Professor MacLagan is despondent about these failures. He attributes them to imperfect training during apprenticeship. Masters either do not take the trouble to teach their apprentices, or the medical men, by dispensing their own medicines and prescribing proprietary preparations, do not give the pharmacist the opportunity to teach his pupils. We believe that there are comparatively few bad masters—not more, certainly, in proportion, than there ever have been. But times have changed greatly, and there are not the same opportunities for imparting knowledge to the pupil, and, as we have previously said, it may become necessary in the future to teach shop subjects in the school. Proprietary preparations are on the increase, and doctors welcome them; dispensaries and dispensing doctors are as thick as blackberries. All this tends towards the extinction of the chemist and druggist as he at present exists. And how is this consummation to be prevented? By such fathers of medicine as Sir Douglas MacLagan lecturing the medical profession out of its trading habits.

ALKALOIDS AND PTOMAINES.

It is just seventy years ago since Sertürner discovered in opium the basic compound which we call morphine. He found it to possess certain properties indicating kinship with the alkaloids. But it had a deep mark of distinction: it was a product of life, a destructible body, as weak as the alkalies chemically but deadly poisonous physiologically. We all know how chemistry has advanced since 1817, how numerous the alkaloids now are, and their value in therapeutics. But when we look at these seventy years it seems that the energy of chemists has been directed to the isolation of new bodies rather than to the study of the constitution of the whole as a distinct group of compounds. This latter study is not, however, by any means a neglected field of research, and those who had the privilege of listening to Dr. Armstrong's excellent paper, presented to the Society of Chemical Industry on Monday night, could not fail to appreciate the advance which has been made of recent years in our knowledge of the decomposition products of the alkaloids, and more especially in improvements of synthetical methods. The importance of the alkaloids from a commercial and medical point of view is better known to pharmacists than to any class of chemists. From a purely chemical point of view they are remarkable from the fact that they all contain nitrogen, a body, as pointed out by Dr. Armstrong, which is considered the most inert of stuffs; but he believed that this supposition is to a great extent fallacious, and in the case of the alkaloids their potency may in some measure be attributable to the nitrogen which they contain, and which he believes exists in alkaloids in the triad state, as it does in their prototype ammonium (NH_3). Ammonium was taken as the starting-point in the elucidation of the constitution of a group of alkaloids of great interest, which comprised neurine, choline, muscarine, and betaine, with some of their derivatives. By replacing the hydrogen of the ammonium with methyl (CH_3) trimethylamine ($\text{C}_3\text{H}_9\text{N}$) is formed:—



Trimethylamine is the connecting link between ammonium and the alkaloids; it exists amongst the decomposition products of certain of them, such as coniine, and it is an essential part of the matter taken for the synthesis of the before-named group. By suitable means trimethylamine is made to combine with ethylene oxide ($\text{C}_2\text{H}_4\text{O}$) and water, choline ($\text{C}_5\text{H}_{13}\text{NO}_2$) being the product, and if we act upon choline so as to abstract the elements of water, neurine ($\text{C}_5\text{H}_{13}\text{NO}$) is formed. Betaine ($\text{C}_5\text{H}_{11}\text{NO}_2$) differs only from neurine in that two of its hydrogen atoms are replaced by an oxygen atom; it may actually be prepared from choline hydrochloride by oxidation, and is formed synthetically by acting on glycerine with methyl iodide. Similarly muscarine ($\text{C}_8\text{H}_{15}\text{NO}_3$) may be considered a derivative of choline; it is obtained from the hydrochloride by oxidation. All these alkaloids exist in nature ready formed. Choline is found in the brain, in the white of eggs, and in hops. A body isomeric with it (amanitine) is found associated with muscarine in the fly-agaric. Muscarine is used in medicine; it is a powerful poison, and resembles pilocarpine in its therapeutic properties. Neurine is also a brain constituent; it exists in eggs and in bile, and betaine is the peculiar alkaloidal principle of beet juice. Here, then, are four natural substances which have been formed in the laboratory, and, moreover, recent researches show that they are formed in another and totally different manner, for they have also been obtained as *ptomaines*, or alkaloids of putrefaction. Ptomaines are formed during the decay of animal and vegetable

albuminoids. They resemble alkaloids in their reactions, and, like the alkaloids, many of them are poisonous. Brieger, though not the first to investigate them, has certainly brought our knowledge of this peculiar class of substances into proper shape. He has proved that many of the ptomaines result from the action of microbes on animal tissues. In the first twenty-four hours of decomposition choline only is found. This is a comparatively harmless base. As decomposition advances neuridine ($C_6H_{11}N_2$) appears at the end of three days, and the choline disappears, trimethylamine taking its place. Neuridine also disappears in the course of fourteen days, cadaverine ($C_5H_{16}N_2$), putrescine ($C_4H_{12}N_2$), and saprine taking its place. None of these bodies are poisonous, but after the fourteenth day powerfully toxic bodies, such as mydaleine, begin to appear. Muscarine has been found in decomposing fish, and rotten cheese, yeast, glue, and the like all yield bodies more or less related to the alkaloids. The poisonous properties of putrid flesh, fish, and cheese are unfortunately too well known, for seldom a week passes in which deaths are not recorded from the consumption of such food. The effects are due to the ptomaines, and that they are formed by the action of microbes is beyond question. It is, moreover, highly probable that pathogenic microbes possess the property of forming ptomaines, and that the disease symptoms are directly due to the action of these poisonous bodies on the system, rather than to any inconvenience arising from the presence of a few million microbes. We seem to have proof of this in the following facts. Koch and others have found poisonous ptomaines in cholera, evidently formed by the cholera bacillus. A highly poisonous ptomaine—typhotoxine—has been found in cultivations of the typhus bacillus, and the tetanus germ has yielded in cultivations a substance—tetanine ($C_{13}H_{30}N_2O_4$)—which is not only a powerful poison, but has been proved to be capable of producing tetanus. The importance of this field of research is obvious. At present we are fighting hard against the microbes, and the principle upon which we do so is a sound one. But something else may be done, and that is to ascertain the chemical nature and the physiological action of the bodies formed by the microbes. If these bodies are the poisons—the disease-producers—the discovery and application of antidotes will not be the most difficult task for the physiological chemist.

THE TRADE IN HONEY.

THERE is an impression that the prices of honey, which have lately tended decidedly higher, will still advance considerably as the year grows older. It is as yet too early to obtain any definite information about the yield of the coming crop, and all calculations may be upset by the weather prevailing in the principal countries of production during the next few weeks, but it cannot be denied that there is an undoubted inclination on the part of holders to demand higher prices, and a growing scarcity of high-class honeys. Hardly any of the materials used in pharmacy are produced over an area so extensive as that in which honey is gained, or has been held in equal esteem from as early a period of the world's history. And yet within memory of the present generation the conditions of the trade in the article have undergone a complete change, new sources of supply have been found casting the older ones completely in the shade, and even now the trade appears to be on the eve of a fresh development.

From the earliest times Greece and other countries bordering upon the Mediterranean have been famous as honey-yielding regions. The honey of Hymettus, which still forms

an article of commerce, enjoyed the highest reputation in classical times, and a temple was erected in that district to Apollo, under whose special protection the bees were presumed to follow their vocation. In the countries of the Danube, in Switzerland, and in France the export trade in honey is still a large one, but the European yield is probably small in comparison to the enormous quantities poured into our markets by California, Chili, the West Indian Islands, and Australia; nor does it seem likely that apiarists in this country will ever be able to hold their own against foreign competition so far as extracted honey is concerned. The Bee Keepers' Association and other organisations interested in the promotion of British agriculture should therefore confine their energy, we think, to the production of high-class comb honey for table use, for which a market can always be found at a remunerative price.

Unfortunately no statistics are published relating to the importation of foreign honeys into this country, or the re-exports from the United Kingdom, and we are therefore unable to show by figures how far London and Liverpool are drawing towards them the import trade in extra-European honeys as compared with Continental ports.

The Californian honey industry is of very recent date. When the country was first opened up gold-mining was the one pursuit upon which the thoughts of all settlers were concentrated, and for many years such quantities of honey as were consumed in the country were actually, it is said, imported from the Eastern States of the Union. Apiculture as a business was first taken up by a farmer in the vicinity of Sacramento, and proved successful beyond anticipation. The originator of the industry then removed his business to San Diego County, in the extreme south of the State, where other farmers soon became competitors in the enterprise, until at present the gathering of honey has grown to such proportions that in many parts of the country the "bee ranches," as they are called, occupy mile after mile of ground in continuous succession. The Californian honey crop, similar to that of all other countries, is extremely variable, and depends entirely upon the weather prevailing during the spring and summer months. By far the best season yet known in California was that of 1884, when no less than 9,000,000 lbs. are said to have been collected. In the succeeding year, however, the yield fell to about 3,000,000 lbs., and in 1886 it amounted to 4,500,000 lbs. The coming crop, according to the latest advices from San Francisco, is considered likely to be a short one, and will probably not surpass that of 1885. It is also said that the stocks which remain on hand at the principal trading centres are light, and there is certainly room for improvement in the price of the article, though the low value of sugar is likely to prevent the price of honey from rising beyond a moderate point, and the sources of supply are becoming so numerous that even a failure of the crop in one country is very likely to be balanced by a more abundant supply from other quarters. The season is late in California this year, and the crop is not expected to come in before July. The bulk of the Californian honey has hitherto been forwarded by rail to New York, whence it partly finds its way to Europe. A considerable quantity is also shipped from San Francisco to England via Cape Horn.

Californian honey is systematically graded according to its colour and general appearance. The highest grade is called "extra white," and is said to be extracted by the bees from the sage flowers; next follow white, light amber, amber, and dark. The now universal mode of packing honey for export is in tins holding about 56 lbs., of which two are packed in a case. There have been numerous complaints concerning the quality of Californian and other honeys, and

in many instances no doubt adulteration has been extensively practised; but at present the tendency with the American farmers appears to be in favour of the shipment of pure and properly graded honey, and it is certain that they will serve their interests by adhering to this policy, for nothing is more noticeable at present than the proportionately high and frequently apparently excessive prices which English buyers are willing to pay for high-class goods, while rubbish of all descriptions, with which the market has been flooded, can scarcely find a purchaser at any price. Until the end of last year the English market was in a very depressed condition owing to the inordinately large stocks of American honey warehoused here; but of late a decided improvement has become apparent, and at present high-class honeys are by no means plentiful.

Chili probably ranks next to California in importance of production, although it is only about ten or twelve years ago since honey from that country appeared on the European markets in considerable quantities. In 1884, when the crop apparently was abundant all over the globe, Chili exported 4,301,472 lbs., and in 1885 2,145,136 lbs. The Chilean apiarists are evidently anxious to improve the quality of their honey, and much of what they ship now leaves little to be desired. The thick white Chilean honey is especially esteemed for medicinal purposes. Most of the Chilean product is shipped to Germany, but large quantities also go to England and France.

The West India Islands and Mexico have for many years exported considerable quantities of honey. That produced by Jamaica mainly finds its way to England, but Cuba, San Domingo, and Mexico carry on a large trade with the United States and the Continent. The Mexican exports are apparently declining. The Australian Continent and New Zealand have also lately commenced to export honey in considerable quantities, and it is scarcely doubtful that a very large trade is capable of development if the shippers are careful to study the requirements of the English markets. We regret not to possess any reliable data regarding the extent of the Australian honey exports, but in all probability the whole of the shipments from that quarter are forwarded to England.

Honey has frequently been shipped from other countries besides those named, but at present the position of the article may be said to be regulated by the production in the various American countries, notably California.

In the spring of last year a trial consignment of Japanese honey was sold by auction in London, and was bought for a manufacturer of blacking at 2s. 6d. per cwt. This price probably discouraged further shipments, and it must be confessed that the quality of the honey left much to be desired; but there is reason to believe that Japan may yet become one of our future sources of supply.

On the Continent Hamburg is one of the principal centres of the trade in foreign honeys, the arrivals at that port averaging about 3,800,000 lbs. per year, though they have sensibly diminished since July, 1885, when the import duty was raised from 3 to 20 marks per 100 kilos. Cuba, Chili, and San Domingo are the countries from which the Hamburg imports are mainly drawn. The numerous sophistications to which honey is subjected render it necessary to exercise extreme care in the purchase of the article. Large quantities of a compound produced by the action of acids on starch are annually sold to unwary buyers under the name of honey, and a great many tests have been published for distinguishing the artificial from the natural product. One of the simplest of the rough and ready tests is to dissolve a small quantity of the sample under examination in twice its volume of water, and to add an equal volume of methylated spirit. Pure honey should remain clear, while an artificial or adulterated

sample will render the water cloudy and deposit a powdery sediment. To preserve clarified honey Mylius recommends the addition to it of 0.20 per cent. of a 50 per cent. solution of formic acid, which does not perceptibly alter the taste. Crude honey, in fact, contains about 1 per cent. of a compound possessing reactions similar to formic acid, and formed after the absorption of the honey from the flower by the bee. The presence of this acid probably causes crude honey to remain free from fermentation longer than the clarified article.

AUSTRALIAN EUCALYPTUS OIL.

THERE is a disposition at present on the part of some French and German chemists to cast discredit on the therapeutic value of Australian eucalyptus oil. This disposition is all the more remarkable in view of the fact, known the whole world over, that any therapeutic reputation which the oil has, is entirely derived from the use of the Australian variety. The quantity of oil produced elsewhere is quite insignificant in comparison with the Australian produce. In Schimmel & Co.'s report (this journal May 28) it is stated that "the Californian and African oils contain a considerable proportion of eucalyptol, a body which is absent from the product of the Australian *Eucalyptus amygdalina*." The writers further state that the value of the Australian oil is below that of the rival products, and they prophesy that it will disappear from the market. Very similar statements are made by M. Adrian in the *Répertoire de Pharmacie*. He states, on the authority of Cloez, who investigated the matter, that the oil of *Eucalyptus Globulus* distilled in Europe is of constant composition and yields eucalyptol—the active constituent—in pretty constant proportion. The opposite is said to be the case with the Australian oil. The author states that the French leaves yield from 0.4 to 0.7 per cent. of oil, and that one kilo. of this oil furnishes 600 grammes of eucalyptol. He makes no attempt to show from experiments that the Australian oils do not furnish eucalyptol, and in this respect Schimmel & Co. rank with M. Adrian.

Cloez, who was the first to isolate eucalyptol, worked with oil obtained from leaves gathered in Paris; they yielded 2.75 per cent. Dried leaves from Hyères gave 6 per cent. of oil. He had some dried leaves from Melbourne, and obtained from them 1.5 per cent. of oil, although they were five years old. This oil he found to be identical with others. From the oil he obtained eucalyptol, and gave it the formula $C_{12}H_{20}O$. Later, Faust and Homeyer found eucalyptol to be a mixture of 70 per cent. of eucalyptene and 30 per cent. of cymene. Oppenheim and Pfaff examined an Australian oil, of which they did not know the origin, and found only eucalyptene. Jahns examined the oil of fresh *E. Globulus* leaves three years ago, and obtained a body free from terpenes, which he called eucalyptol ($C_{10}H_{18}O$). It boils at 176–177°, and has a specific gravity of 0.923 at 0° C. These are the most important researches on the subject, and it will be seen that they afford no substantial basis for the assertion that the Australian oil is either chemically or therapeutically inert. None of these chemists appear to have worked with authentic specimens of Australian oil. Cloez himself used as good a substitute for it as he could get, and found that the oil was identical with the French oils which he used. Surely the word of the discoverer is sufficient proof of identity! But the chemists are not agreed as to what eucalyptol is, and that being so, we must take it to be the substance obtained under certain conditions, viz., by treating the oil with caustic potash, then distilling from calcium chloride until the product has a boiling-point of 176–177°. In an interview with Mr. Bosisto last summer he

told us that both the Australian globulus and amygdalina oils yield eucalyptol in about the same quantities. At the meeting of the British Pharmaceutical Conference in Aberdeen Mr. Umney, in the course of a discussion, said that he had made eucalyptol during the twelve months previous, "and had found that the oil of *E. amygdalina* would yield about 50 per cent. of eucalyptol." This is sufficient proof of the want of bottom in the scare which French and German people are trying to get up.

Apart from the chemical side of the question there is the commercial one to consider. As soon as there was a constant demand for eucalyptus oil the Australian distillers found that they could not possibly supply it with the globulus oil; and the amygdalina variety was placed on the market under its own name. This was early in the 1860 decade. People at the time, and there are many still, seemed to think that *E. Globulus* was the solitary species of the genus, and persisted in speaking of the new oil as "Ol. eucalypt. glob." All the while the amygdalina oil was making its way in therapeutics. Lister and others of his school found it to be a valuable antiseptic, and it is still as highly valued as such. The globulus oil has scarcely been used in this country, for the simple reason that it is too expensive. We have ascertained that the variation in the physical properties observable in commercial *E. amygdalina* oils is due to the method of distillation, the water-white oils being redistilled. But this does not injuriously affect their eucalyptol value. The production of eucalyptus oil in Europe is infinitesimal compared to the enormous quantities which are received from Australia, and were we to depend upon the European supply prices would rise to a fabulous figure. The present attempt to discredit the Australian oil appears to be due to a desire to bring about such a state of things.

The Minor Examination. It is difficult to explain on any reasonable hypothesis the policy adopted by the majority of the Pharmaceutical Council in reference to Mr. Symes's motion last week. With or without good reasons one or two legal points have been raised in reference to the conduct of the Minor examination, and the discussion of these has in turn suggested a suspicion that candidates are polished off with rather less attention than should be the case. The complaints, based as they have been on the narratives of rejected candidates, could not be expected to convince pharmaceutical fathers whose faith in the wisdom and righteousness of everything done at Bloomsbury Square is so implicit. But some of these disciples, who could not be influenced by letters in this journal, or remarks made by anyone outside the magic circle, have been a bit staggered at the earnest eagerness of those who know most about the examinations to stifle any discussion concerning them. The subject is tender and delicate, say Messrs. Bottle and Schacht, to be talked about openly. Let us go into committee, and (as Mr. Symes paraphrased their thoughts) prepare some cut-and-dried speeches for public consumption. Such a course practically admits that there is a ground for complaint, and the Council may rest assured that chemists will not entertain that respect for the qualifying examination of pharmacy which they have been instructed to feel until the question has been properly threshed out. When that time comes Mr. Cross and any other of his colleagues who fear that they "might say something which would do harm" may have ascertained that there is an excellent means of avoiding that risk.

* *

Tinctura Ferri Muriatis. Previous to the publication of the British Pharmacopœia the tinctures of ferric chloride used in England and Scotland were prepared in a different manner from the British Pharmacopœia tinctura ferri perchloridi. The Edinburgh Pharmacopœia tinctura ferri muriatis was prepared by digesting the brown oxide (or oxycarbonate of iron) in hydrochloric acid, rectified spirit being afterwards added. The London Pharmacopœia tinctura ferri sesquichloridi was a very similar

preparation. Both differed from the one now official in that from the beginning they contained the iron in the ferric and ferrous condition, and probably in some other condition which has not been determined. Ethereal bodies, such as chloride of ethyl, were also present. These old tinctures have always been preferred by some physicians; amongst them is Dr. Charles Bell (Edinburgh). Writing to the *British Medical Journal* of last week, he expresses his surprise that no description of the Edinburgh tincture is to be found in Garrod's "Materia Medica." Christison in his "Dispensatory" states that it "is a favourite preparation with many for obtaining the tonic action of iron, and it is an exceedingly convenient form for administration. It has also been thought by some to possess specific virtues in diseases of the urinary organs, and is used somewhat indiscriminately in this class of affections. It is serviceable in dysuria, connected with loss of tone of the bladder, and it has been found to diminish the mucous secretion of that organ. Sometimes it acts as a gentle diuretic." Dr. Bell adds that it has a powerful influence in purifying the blood, as is fully illustrated in its effect in zymotic diseases, more especially in erysipelas, diphtheria, and puerperal fever. Clinical notes of cases are given in support of this statement, which Dr. Bell "considers enough to satisfy every unprejudiced and judicious person, and to show the egregious error of having ignored so precious a medicine and attempting to supersede it by the tincture of the perchloride, the medicinal properties of which are so much more limited, especially as a remedy in erysipelas and diphtheria." He also believes that the tincture would be useful in scarlet fever. The Edinburgh tincture was made by digesting 6 oz. of the brown oxide of iron in a pint of hydrochloric acid at a gentle heat for a day, then adding 3 pints of rectified spirit, and in a short time filtering.

* *

A University Semblance. Some time ago, it will be remembered, the semblance of a conclusion was given to the agitation for a teaching university for London by the proposed founding of a university at Westminster. The proposal was for the benefit of the medical students solely. The collegiate bodies which have done so much for education in the Metropolis, viz., the University College and King's College, determined evidently not to be beaten, have resolved to petition for a charter of incorporation. In the petition it is stated that the London University long ago abandoned the principle of affiliation with these and other colleges, which was one of the objects of its foundation. It is now merely a degree-granting body, and more national in that respect than metropolitan. Moreover, it is stated that the existence of the university would not interfere with the work of a teaching university such as is contemplated in the charter, nor would the new body interfere with the older one. It is proposed that the university should give degrees in arts, science, and medicine, and should have power to add other faculties if desired. As the scheme for the Westminster University was formulated by the Royal Colleges of Physicians and Surgeons, it is proposed to "specially associate" these colleges with the new university. London schools of medicine would be looked after by including their teaching members in the assembly of the faculty of medicine. The students of such schools would be considered admissible as candidates for medical degrees, and the conjoint diploma of the two royal colleges would be taken as a preliminary condition for obtaining a medical degree in the university, the colleges retaining their present control over the granting of diplomas. A scheme such as is contemplated by the petition has long been the dream of London medical teachers and pupils alike. They have all the educational facilities, and better opportunities for clinical instruction than exist in the university cities of the kingdom, but there is no degree for which the students may enter, the London University M.B. and M.D. degrees being quite beyond the reach of the average student. London students therefore suffer a great hardship. The present scheme is one which would be likely to place them on an equal footing with the students of provincial universities, and it is sufficiently comprehensive in its character to remove any feelings of jealousy which may exist between the different schools. Already, however, opposition to the scheme has become manifest, and it is not at all likely that the prayer of the petition will be granted without a lot of trouble.

Henry George on the Armbrecht case. In his paper, the *Standard* (New York), Henry George makes some comments on the Armbrecht case, which has been pretty fully canvassed in these columns. His statement of the facts is, "that Mr. Armbrecht, a chemist, some sixteen years ago established himself in business in a house built upon the estate of the Duke of Westminster. The lease had sixteen years to run, and he bought the building and built up a lucrative trade, his understanding being that the lease was one guaranteeing the right of renewal. The lease is about to expire, and the tenant has received a peremptory notice from the Duke to get out. The building goes to the ducal robber, and with it the goodwill of the business which the chemist has built up;" and his comment on the history thus narrated is that "the labour and capital of the working chemist go into the capacious maw of the hereditary thief called in England a lord." Henry is committed to a very revolutionary programme, and it would be prudent on his part to be careful about his statements. The premises were let for sixteen years expressly "to fit in with the leases of adjoining premises," says the agent, and on this point he has not been contradicted. This is the crucial point of the controversy, and Mr. George knows it, and therefore boldly meets the difficulty by stating that the chemist's understanding was "that the lease was one guaranteeing the right of renewal."

Danger of Low Prices. Full prices for medicines are, we all know, good for pharmacists, and there is still a lingering belief among some of our craft that what is good for pharmacists must somehow be to the advantage of the public. But the credit of conclusively proving this contention is due to a Belgian journal. We have already mentioned that a co-operative pharmacy has been established at Ghent, and to the unspeakable disgust of all right-minded pharmaciens this monstrosity actually issued handbills announcing tariffs for specialities, medicaments, and dispensing. After waiting for some time in blank amazement, and the anticipated fire from heaven not having descended, the *Pharmaceutical Review* of Ghent has published a bitter article showing that the end of true pharmacy is approaching. But who, asks our contemporary, will benefit by these reduced prices? "The tailor, the dressmaker, the theatre will raise their prices in proportion as the pharmacien reduces his." We had not seen it in that light. The money people save for their physic they will spend in wild extravagance. In Belgium drink is so cheap already that they can hardly plunge in that direction, but in England that is the way the pharmacists' discount will go. Cannot we convince the public that it will be better for them in the long run to pay 1s. 1½d. for their Beecham's pills than to get these for 10½d. and then spend the odd 3d. in brandy?

CHARGE AGAINST STEEDMAN'S SOOTHING POWDERS.—We find in the *Sydney Globe* of April 9, 1887, an extraordinary report of an inquest held by the city coroner, Mr. H. Shiell, J.P., on the body of a child named Catherine Mabel Jones, who was found dead in bed on March 30, at about 10 P.M. In the afternoon of that day she complained of toothache, and her mother put her to bed shortly after seven o'clock, giving her one of Steedman's soothing powders. Dr. Jefferies, who made a post-mortem examination of the body, was of opinion that the child must have recently suffered from an attack of pleurisy, all the internal organs, except the left lung, being in a normal condition. Elizabeth Jones, mother of the deceased, stated that she bought some Steedman's soothing powders from a chemist named Williams, at Newtown. She gave deceased one the night before she died. Mr. Hamlet deposed that he found a considerable amount of morphia in the stomach. He also analysed six of the Steedman's soothing powders, and found that they contained from 2½ to 4¼ grains of morphia respectively. Witness stated that ½ oz. of morphia would kill a child. [We give this evidence exactly as we find it, though it is quite obviously an inaccurate report of the analyst's testimony.] The jury returned a verdict of death from morphia which was contained in the powder, and that the powder was given by deceased's mother. The jury added a rider to the effect that people should not buy the powders.

Personalities.

SIR HENRY ROSCOE AND DR. ASA GRAY (Professor of Botany, Harvard University) are to receive the D.C.L. degree of the Oxford University. The latter gentleman is also to receive the similar degree from the University of Cambridge.

MR. R. M. HOLBORN, who will be remembered for the vigorous fight he waged with the public analysts under the first Adulteration Act, and who was mainly instrumental in bringing about the reference in disputed cases to the Somerset House Laboratory, is now engaged in active advocacy of the establishment of free libraries in London. He offered a handsome donation in money and 600l. worth of books to the parish of Islington if they would adopt the Act, but there it has been rejected. Mr. Holborn has now transferred his offer to Clerkenwell, and, in conjunction with Mr. Robert Hampson and others, is carrying on a crusade in favour of the movement in that locality in his usual energetic fashion.

Obituary.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

AMOORE.—On May 27, at Castle Street, Hastings, Mr. Charles Amooore, chemist and dentist. Aged 76.

BUSTON.—On May 24, Mr. Robert Buston, chemist and druggist, Cavendish Street, Barrow-in-Furness. Aged 40.

JOHNSON.—On June 2, at his residence, High Street, Uttoxeter, Mr. John Borwell Johnson, pharmaceutical chemist. Aged 58.

LLOYD.—On June 5, Frederick William Wellington Lloyd, Eastbourne, chemist and druggist. Lately manager to the General Apothecaries' Company, Oxford Street; and previously manager to Mr. Harris, St. James's Street, Piccadilly. Aged 37.

PAYNE.—The death is announced at Shiffnal of Alfred Payne, F.C.S., at the age of 68. Mr. Payne was one of the founders of the Pharmaceutical Society, and will long be remembered in the neighbourhood of Wolverhampton, and, indeed, throughout the Black Country, for his courtesy and genial good nature, no less than for his practical ingenuity and scientific attainments. He was for many years manager of the Galen Chemical Works at Pittingshall, near Wolverhampton.

RUSTON.—On May 28 Mr. Thomas Ruston, chemist and druggist, Maryport. Aged 77. The deceased was born at Broughton in 1810. His father, Samuel Ruston, was Baptist minister at Great Broughton for many years. Young Thomas Ruston elected to be a druggist, and served a portion of his apprenticeship at Wigton. He finished up his apprenticeship, however, with a Mr. Porter, who at that time kept a druggist's shop in Senhouse Street, Maryport. He started in business at Wigton about 1832, and removed to Maryport as the end of 1836 or the beginning of 1837. Here he did an excellent business, from which he retired in 1870. For a few years he lived at Aspatria, but subsequently again took up his residence in Maryport. In the early part of the present year his wife died. They had been married no less than fifty-two years, and her death proved a severe blow to the old gentleman. A few weeks ago the deceased went to live with his son in Manchester. He had been ailing for some time, and died of heart disease.

VAN HOUTEN.—The death, on Friday, May 27, is announced of Mr. C. J. van Houten, the proprietor of "van Houten's cocoa." Mr. van Houten was a native of Holland, and died at Weesp, a small town in that country, where his works were situated.

WELLINGTON.—On May 25, at the residence of his sister, Bristol, Frederick George Noble Wellington, pharmaceutical chemist, until latterly of South Petherton, Somerset, youngest son of the late George Wellington, of Yeovil. Aged 62. Mr. Wellington had been in business in South Petherton for over 40 years, and only retired last December.

Trade Report.

Note to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., June 9.

A FAIRLY satisfactory volume of business has been transacted since last week, and several important articles close at higher prices, or with firmer tendency. The makers of *Bichromate of potash* at the end of last week advanced the price of that article, and they may, it is thought, agree to further raise their quotations. *Sulphate of ammonia* is again slightly dearer, and a good business has been transacted in *Bleaching powder*. On the other hand, *Citric acid* has fallen in value, and *Mercurials* close 1d. per lb. lower than at the commencement of the preceding month. It is thought that a change is impending in the quotation of *Iodine*, but nothing definite is known, this article being one in which changes always occur suddenly, and generally unexpectedly. *Morphia* remains very firm, but somehow the alarming reports from Turkey concerning the prospects of *Opium* are received with caution in many quarters. An important movement is progressing in *Quinine*, consequent upon the rise of about 10 per cent. all round in the value of East Indian *Cinchonas*. Since last week German quinine in bulk is fully 1½d. per oz. dearer, but the official quotations of English and French brands have undergone no change as yet.

In the drysaltary market *Gambier* remains very firm, but second orange and garnet *Shellac* are again a trifle cheaper, and Chinese *Galls* have declined about 2s. per cwt. In yesterday's spice sales, held after an interval of three weeks, a good many changes were established, for all of which, however, the trade was well prepared. *Nutmegs* and *Mace* are considerably dearer, scarcity being anticipated in the supply, but *Zanzibar Cloves*, broken *Cassia lignea*, cut *Cochin Ginger*, white *Singapore Pepper*, and *Arrowroot* all rule in favour of buyers. The monthly sales of *Cocoa butter* have resulted in a slight reduction on that article. The upward movement in the oil market is progressing, *Cottonseed*, *Linseed*, *Rape*, *Palm*, and *Cocoanut* (Ceylon) oils being all higher in price. *Turpentine*, however, is cheaper. The new crop of West Indian *Tamarinds* which is now coming forward is selling at an important advance. *Coca leaves* and *Vanilla* are becoming scarce and are firmly held; *Caraways* and *Hempseed* are also slightly dearer, and *Oil of neroli* is almost unobtainable. It is now definitely known that the convention hitherto existing among the manufacturers of nitrate of soda at Iquique, on the Pacific coast of South America, has been dissolved. The object of the association was to limit the production of saltpetre; its effect was to paralyse the action of many establishments. It will still continue for some time to influence the price of this article, because a number of the establishments are unable to produce more than was formerly stipulated by the convention. American advices from May 15 state that in Chili the cholera epidemic is officially declared to be at an end. At Rio Janeiro the quarantine against River Plate and Chilian arrivals has been reduced to eight days, including the time consumed on the voyage. It is stated that negotiations have been going on for some weeks with a view to effecting an amalgamation between the London and St. Katharine's and the East India and West India Dock Companies. Influential shareholders in both companies are favourable to a fusion, but the difficulty of securing a basis for terms in the case of such huge and complicated undertakings is very great.

ACID (CITRIC) is again lower, 1s. 7d. per lb. having been accepted.

ACID (OXALIC) remains rather firm and in fair demand at 4d. per lb.

ACID (TARTARIC) is slightly firmer, and now quoted at 1s. 6¾d. for *English* and 1s. 6½d. to 1s. 6¼d. per lb. for *foreign*.

ACIDS (VARIOUS).—The following are among the current quotations:—*Benzole*, from the gum, 5½d. per oz.; *Carbolic* (B.P.), 1s. 8d. per lb.; *Gallic*, 3s. 5d. per lb.; *Hydrochloric* (B.P.), 22s. 6d. per cwt.; *Nitric* (1.420 B.P.), 38s. per cwt.; *Phosphoric*, diluted B.P., 3d. per lb.; *Pyrogallie*, *English*, 1s. 9d. per oz., and pure *Sulphuric* B.P., 2½d. per lb.

AMMONIA.—*Carbonate* remains dull at 4d. per lb., with a discount of 17½ per cent; while *Sal ammoniac* shows no change, and is quoted at 36s. for first, and 34s. for second quality. *Sulphate* has again risen slightly, and closes firm at 11l. 17s. 6d. to 12l. for grey, 24 per cent, both in London and at Hull.

ANISEED is becoming very rare, so far as parcels on the spot are concerned, and holders are very firm, while a steady demand prevails. We quote *Russian* seeds at 25s., *Turkish* at 30s., and *Alicant* at 60s. per cwt.

ANTIMONY.—The quotation for butter of antimony is 24s. per cwt., and for powdered black 22s. per cwt.

ARROWROOT is in very large supply at extremely low rates, 2¼d. to 3¼d. for *Barbadoes*.

ARSENIC remains very steady, powdered white selling at 11s. 3d. to 11s. 6d. per cwt.

BISMUTH.—*Subnitrate* (B.P.) is held at 7s. 6d. per lb.

BLEACHING POWDER is in very good demand, and sells at 8l. 10s. per ton ex warehouse. A large business has been done in anticipation of requirements by the London Board of Works, and this has caused prices for "softwood bleach" to advance in the North.

BORAX remains very quiet. Manufacturers quote 29l. to 32l., according to brand, while second-hand holders offer at 27l. to 30l. per ton.

CAMPHOR (REFINED).—*Bells* are now quoted at 11½d., *flowers* at 10d. to 1s. 1d., and squares, according to size, at 11½d. to 1s. 4½d. per lb.

CANARYSEED.—Business has been somewhat restricted of late, owing principally to the fact that the London quotations are just now above those prevailing at other centres, a circumstance which stands in the way of a satisfactory export business. The arrivals here have been small; amongst them those from the River Plate are at present the most extensive. The stocks in this country have gradually worked down; Liverpool holds at present 12,000 bags, against 16,000 on March 1. New York values keep very low indeed; the corresponding price for Turkish seed is there paid 40s. f.o.b. London only. In London markets have remained fairly steady. *Turkish* seed, 43s. to 45s.; *Morocco*, 50s. to 51s.; *Dutch*, small-grained, 49s. to 50s., bold, 52s. to 54.; *Spanish*, 55s. to 59s. per 464 lbs. ex warehouse. Of *English* seed only very little is offering at 42s. to 45s. per qr. imp.

CARAWAY SEED is rather steadier, sales having been made at 32s. for *Dutch* and 27s. to 28s. per cwt. for *Russian* seed. *Mogadore* is held at 27s. per cwt.

CASSIA LIGNEA has sold at lower rates, 17s. 6d. to 18s. having been accepted for broken.

CINCHONA.—For the bark sales on Tuesday a total supply of 3,635 packages was catalogued, but 230 of these, all Ceylon grown, were withdrawn before the commencement of the auctions. American cinchonas were somewhat neglected, and the bulk, as usual, was bought in. For all other varieties there was a very good demand, and the report that the shipments from Ceylon are declining considerably caused a decidedly firmer tone to prevail. The average unit may be placed at 2¾d., an improvement of about 10 per cent. as compared with the previous rates.

CLOVES are about ¾d. per lb. cheaper for good qualities: *Zanzibar* sold as follows:—Dark to middling, 10¼d. to 11d.; fair to good bright, 11¼d. to 11¾d. per lb.; *Seychelles* at 1s. to 1s. 0¼d.

COCA LEAVES.—Good *Huanoco* leaves are getting very scarce, and reports from Peru are not calculated to cause the belief that supplies will become more abundant shortly. Good leaves are rarely offered at auction now, privately 1s. 6d. per lb. is said to be asked for best *Huanoco*.

COCAINE is quiet at 11½d. to 1s. per gr. The German alkaloid is simply refined from the crude cocaine sent over from Lima, and the scarcity of the leaves has not affected the manufactured article thus far.

COCOA BUTTER.—At the monthly sales held on Tuesday 300 cases of 2 cwt. each of Cadbury's brand were offered and sold at a slight decline, say between ¼d. and ¾d. per lb., as compared to last month's prices. The figures obtained ranged from 1s. 3½d. to 1s. 3¼d. per lb.

CODEIA.—No change has occurred in the price of this article, which still remains held at 18s.

CREAM OF TARTAR is in steady demand at the previous quotation of 123l. for first quality.

CUBEBS.—Fine genuine berries are difficult to obtain, recent arrivals having mostly proved to consist of very mixed descriptions of berries. On the Continent the arrivals, we hear, are of the same class.

CUMIN SEED remains unchanged at the previous quotations; but as the prices abroad are advancing and no arrivals come in, there is a firmer tendency. *Maltese* seed is held at 45s., *Mogadore* at 30s. to 32s., and *East Indian* at 27s. per cwt.

DILL SEED at 10s. to 12s. per cwt. in fair demand with insufficient supplies.

ETHER.—The present price for rectified ether B.P. is 4s. 5d. per lb., and for methylated, 10½d. per lb.

FENNEL SEED is in good demand, at 18s. to 22s. per cwt. for *East Indian*, and 26s. for *German* seed.

GALLS.—The market has been very quiet lately, and in public sale on Tuesday a parcel of 262 cases *China* were sold at 55s. to 56s. 6d.—a decline of about 2s. per cwt. In *Turkey* galls there is some slight demand for blue *Bussorah*, which are quoted at 60s. to 62s. 6d., but other varieties are without business.

GAMBIER remains firm, with sales at 21s. 7½d. per cwt. for April-May. Free cubes have sold at 33s., and slightly blocky ditto at 32s. per cwt. The imports during May were 639 tons, the deliveries 942 tons, leaving the stock in warehouses 1,982 tons. The quantity afloat for England and the Continent is 2,194 tons, against 1,781 tons this time last year.

GINGER.—*Cochin* is in good supply, but buyers mostly hold aloof, and only about one-fourth of the supply in public sale found purchasers at a decline of 2s. per cwt. for fine bold cut ginger, which realised 75s. to 90s. per cwt. Good to fine bold *Jamaica* sold at 75s. to 90s. per cwt., and extra fine picked in half-barrels at 125s. to 155s. per cwt.

GUM ARABIC.—The arrivals of *Australian* gum continue to be considerable, and several new parcels will be sold by auction to-day. In *Barbary* gums no business worth noting is reported. Of *East Indian* gums fine *Aden* continues to be very scarce, and is much inquired for. About 25 cases clean reddish *Bombay* gum slightly *olibanum* scented have sold at 6l. per cwt. An offer of 65s. has been refused for 100 bales of rather small *Gehzirah* and *Talea* gum, holders asking 70s. per cwt. Since last week's drug sales no business in *Turkey* sorts is reported. *Senegal* gum is quiet, 6l. 5s. per cwt. being the nominal value of *Galam*. At *Bordeaux* the quotations continue high.

HEMPSEED.—The stocks have become reduced of late, and with a fair inquiry values have hardened. At the same time holders of seed at the shipping ports are asking an advance of 1s. per qr., which, however, so far has been difficult to obtain. There is sufficient seed in the various quarters to supply our market, but as prices are even to-day at a very low level, and holders seem less anxious to sell. The price on the spot is 21s. 6d. per 336 lbs. Dutch seed is still well appreciated.

IODINE.—The price remains unchanged at 9d. per oz., but the rumours of an impending change are again in circulation, and it is said that a large trade has been done lately. *Re-*

sublimed Iodine is held at 14s. per lb., and *Iodide of potash* at 11s. 6d.

LEAD (ACETATE).—*Foreign* white is still very scarce at 24s. per cwt., while pure English is quoted at 44s. per cwt.

MACE has advanced in sympathy with nutmegs. Fine bright pale *Penang* is worth 3s. 2d. to 3s. 3d. per lb.; wild *Bombay* 8d. to 10d. per lb.

MERCURIALS.—Prices are 1d. per lb. cheaper than at the commencement of May, and now stand as follows:—*Calomel*, 2s. 9d. per lb.; *corrosive sublimate*, 2s. 1d. per lb.; *mercurial ointment*, 1s. 7d. to 1s. 9d. per lb.; *ditto pill*, 1s. 10d. per lb.; red or white *precipitate*, 2s. 11d. per lb.; *vermilion*, 2s. 4d. per lb.

MORPHIA is firmly held at 6s. 6d. per oz. by the manufacturers.

MUSTARD SEED is in very good demand at 9s. to 11s. per bushel for good to fine *English*, and 8s. to 9s. for *foreign* seed. Brown *English* may be had at 12s. to 12s. 6d. per bushel, and *East Indian* at 5s. 6d. to 6s.

NUTMEGS are dearer, chiefly in consequence of a speculative demand, founded upon an alleged shortness of the crop in the East Indies. America has also been buying freely in this market, attracted by some advantages in the import duty which are not obtainable when nutmegs are imported direct to the United States. The holders of nutmegs have taken advantage of the improvement to bring forward considerable quantities, which, however, found purchasers at steady rates. *Penang* sold at 2s. to 4s. 1d. for 153's to 67's; *Singapore*, limes, at 2s. 5d. to 2s. 10d. for 90's to 130's. *West Indian* nutmegs are also dearer, and realised from 1s. 8d. to 4s. 1d. for 143's to 62's. It is thought that the present high values are not fully justified by the stock here, which is in excess of last year's, and as shipments usually arrive freely during the next two or three months, it remains to be seen if the report of a small short crop is correct, as otherwise the high prices now ruling here will quickly attract supplies.

NUX VOMICA is getting scarce. The last crop is stated to have been very small, and as the new will not arrive before the end of the year higher prices are anticipated.

OPIUM.—The Smyrna market is reported to be extremely firm, but, although holders in London are asking high prices, viz. from 15s. to 17s. for *Druggists' Opium*, and up to 14s. 6d. for *Persian*, there is little doing here, and buyers do not appear to respond very readily to the views of the "bull" party. Advices from Smyrna estimate the total crop, including *Salonica* and *Malatia*, at 3,500 baskets; and on this basis it is calculated that, with a stock of 2,500 packages in Turkey, 2,800 in London, and 600 in America, there will be a total of over 9,000 packages available, which is more than a year's consumption, and will probably prevent the prices from rising to abnormal figures. From *Salonica* it is reported that the gathering of the crop has now commenced, and although the sowings have been only three-fourths of last year's, the yield will probably be about the same, as the weather has throughout been favourable, and the plants have scarcely suffered any damage from cold. At Constantinople there is a stock of about 250 cases, which holders are not anxious to part with, although there are but few buyers.

OILS (ESSENTIAL).—There is no change in Italian essential oils. Pure essential oil of *Almonds* is quoted at 25s. per lb., and the demand both for this variety and for the inferior foreign oil is well maintained. *Star-anise* is quiet, holders asking 7s. 6d. per lb., at which we have not heard of any transactions. *Cassia* is steady at 2s. 9d. per lb. No improvement is manifested in *Citronella*, of which native brands may still be had at ¼d. to ½d. per lb. English oil of *Cloves* is quoted at from 6s. 9d. to 7s. per lb. The supply of English oil of *Dill seed* is reported to be very short now, and holders require more money. There have been a good many inquiries for *Oil of Geranium*. Good quality oil of *Neroli* is almost unobtainable. The distillation is now proceeding in the South of France, and although the makers have not as yet fixed their price, it is thought that the quotations will rule considerably higher than last season. The latest quotation for *Neroli bigarrade* was about 13s. per oz. American oil of *Peppermint* is more sparingly offered, 16s. per lb. being required, though perhaps 3d. less would be accepted. *Oil of Pimento* is held at 12s. per lb. Reliable news concerning the

coming crop of *Otto of Rose* cannot be looked for until about the middle of next month, but there are rumours that the yield promises to be a good one.

OILS (FIXED).—There is a good business passing in Ceylon *Cocunut* oil, both on the spot and for forward delivery, and prices are dearer, viz., 24*l.* to 24*l.* 5*s.* Cochin oil is quiet, at 31*l.* to 33*l.*, and the price of Mauritius oil is also unchanged. In *Cod-liver* oil there is nothing new to report. *Cottonseed* oil has further advanced, and closes at 19*l.* for crude, and 21*l.* to 21*l.* 5*s.* for refined oil. *Linsced* oil is likewise dearer, at 22*l.* 7*s.* 6*d.* to 22*l.* 15*s.* There are few sellers. *Olive oil* quiet at previous rates, 35*l.* for Spanish, 32*l.* 10*s.* to 33*l.* for Sicilian, and 31*l.* to 31*l.* 10*s.* for Mogadore. *Palm oil* is somewhat dearer, fine Lagos 21*l.* 10*s.* in London. *Rape oil* has further advanced during the week, but at the close a weaker tone prevails. English brown, on the spot, 23*l.* to 23*l.* 5*s.*; refined, 24*l.* 10*s.* to 24*l.* 15*s.* *Turpentine* has declined in value. American spirits, on the spot, are worth 27*l.* 9*s.* to 28*l.*; September-December, 25*s.* 9*d.* to 26*s.*

PEPPER dull, both for the black and white varieties. Black *West Coast* sold at 6½*d.* to 7*d.*, and very bold *Malabar* at 8½*d.* to 9*d.* per lb. White *Singapore* is somewhat cheaper at 12½*d.*, and *Siam* at 12½*d.* per lb.

POTASH.—The price of *bichromate* was advanced 1*d.* per lb. a few days ago, owing, it is said, to a combination among the manufacturers. *Bromide* is still obtainable at 1*s.* 6*d.* per lb. *Chlorate* remains at 6½*d.* per lb., with a good inquiry, and commercial *cyanide* of potash is quoted at 1*s.* 2*d.* per lb. Yellow *prussiate* remains very steady at 7½*d.* per lb.

QUININE has made a decided advance, which set in immediately after the bark sales. The movement thus far appears mainly speculative, but there seems some ground for believing that it is well supported, and it will no doubt be assisted by American operators. A large business is stated to have taken place, up to 1*s.* 11*d.* per oz. for *German* in bulk, and to-day 2*s.* 1*d.* per oz. was demanded by one of the German manufacturers, the others quoting 2*s.* *Howard's* brand is quoted at 2*s.* 6*d.* to 2*s.* 6½*d.* for bottles, and 2*s.* 4*d.* for bulk; *Pelletier's* at 2*s.* 5*d.* for bottles.

SHELLAC.—The slightly firmer tendency of the market which was noticeable last week has given way to a duller tone, the May statistics not being favourable, and buyers only covering their actual wants. In public sale on Tuesday 707 chests were offered, mostly "without reserve." Of this quantity 430 found purchasers at slightly lower prices for garnet and orange, values ruling as follows:—Fine orange, BCL in house, at 50*s.* to 51*s.*; good to fair *Second Orange*, D in diamond, at 47*s.* to 47*s.* 6*d.*; SCSR in diamond, at 44*s.* 6*d.* to 45*s.*; MM in diamond, at 44*s.* to 42*s.* 6*d.*; GS in circle, at 44*s.* *Garnet shellac*—AC, fine bold free, unworked, Calcutta terms, 41*s.* to 41*s.* 6*d.*; BCB dull, 37*s.* to 33*s.* *Button lac*—WBSC in house, very fine first blood, at 56*s.*; fine first, 50*s.*; dark second, 44*s.* The market closes dull, with sellers of G in triangle afloat at 59*s.*; SD in circle at 51*s.* c.i.f.; and TN second orange at 46*s.* 6*d.*, landed terms. The latest mail advises from Calcutta state that owing to an outbreak of cholera at Mirzapore, and the consequent difficulty of keeping the factories at work, sellers generally have withdrawn their goods from sale. Those shippers, therefore, who had still to cover home sales of ordinary Native Orange, despairing of any decline in price here, rushed into the market and secured about 1,000 chests at 19 4 to 19 8*s.*

TAMARINDS are about 20 per cent. dearer. At auction 213 barrels of the new *Barbadoes* crop sold at 16*s.* to 17*s.* per cwt.

VANILLA.—Privately there is still a good demand, and holders are very firm. It is said that the next Mauritius crop will be a small one, owing to the excessive rains which have fallen in the island.

AMERICAN CABLEGRAM.

NEW YORK, June 9.

THERE are no new features to report in the condition of the drug market here. Speculators are trying to bring about a rise in *Quinine*, but up to date no change has taken place in the quotations.

LAST MONTH'S TRADE STATISTICS.

THE Board of Trade Returns for May show the following figures:—

	May, 1886	May, 1887
Total value	£29,023,303	£27,921,321
Imports.		
	May, 1886	May, 1887
British and Irish produce ..	£16,301,022	£16,497,836
Foreign and colonial produce (partly estimated) ..	4,592,142	4,700,128

Below are the details affecting drugs and chemicals:—

	May, 1885	May, 1886	May, 1887
Imports.			
Drugs, unenumerated .. value £	53,592	51,780	59,653
Chemical manufactures and Products, unenumerated ..	119,552	96,020	111,277
Alkali cwt.	5,745	11,726	3,737
.. .. value £	4,478	6,983	2,809
Brimstone cwt.	93,177	52,158	59,842
.. .. value £	23,897	12,473	13,229
Nitre (nitrate of soda) .. cwt.	143,606	183,356	396,684
.. .. value £	70,914	93,762	209,466
" (nitrate of potash) .. cwt.	31,066	22,854	30,938
.. .. value £	27,877	20,342	26,951
Quicksilver lbs.	715,875	782,700	315,000
.. .. value £	52,498	65,165	27,875
Bark, Cinchona cwt.	9,406	13,158	13,803
.. .. value £	63,602	66,719	62,338
Gum Arabic cwt.	9,205	3,243	2,753
.. .. value £	26,270	13,587	11,700
Lac, seed, shell, stick, and dye .. cwt.	16,175	12,168	19,739
.. .. value £	51,923	34,493	51,179
Spices—			
Cinnamon lbs.	45,538	87,105	23,800
.. .. value £	2,535	3,316	941
Ginger cwt.	16,466	12,237	16,796
.. .. value £	32,034	27,862	38,090
Pepper lbs.	1,894,107	1,451,266	1,756,556
.. .. value £	60,943	42,226	58,526
Dyes and tanning materials—			
Bark (for tanners' or dyers' use) .. cwt.	26,090	37,813	48,066
.. .. value £	11,342	15,895	24,398
Aniline dyes	15,741	14,627	24,833
Alizarine	12,602	21,841	19,586
Other coal-tar dyes	313	—	75
Cochineal cwt.	847	544	350
.. .. value £	5,307	3,193	2,185
Cutch and gambier tons	1,522	2,047	1,513
.. .. value £	33,422	46,697	35,426
Indigo cwt.	2,580	855	3,200
.. .. value £	45,014	19,023	62,263
Madder, madder root, garancine, and munjeet cwt.	1,120	1,451	2,179
.. .. value £	1,650	1,768	2,353
Valonia tons	3,771	3,945	1,657
.. .. value £	58,150	54,405	24,801
Oils—			
Cocoa-nut cwt.	4,941	21,161	9,018
.. .. value £	7,726	28,203	11,915
Olive tons	2,721	2,708	1,921
.. .. value £	109,463	102,995	70,422
Palm cwt.	66,297	87,289	71,138
.. .. value £	93,191	84,207	67,173
Petroleum gals.	4,307,005	7,011,247	1,744,682
.. .. value £	142,008	174,510	62,531
Seed, of all kinds tons	878	1,949	1,127
.. .. value £	26,249	44,730	26,897
Train, blubber, and sperm .. tons	881	650	1,399
.. .. value £	25,154	18,437	29,737
Turpentine cwt.	2,751	1,309	3,715
.. .. value £	3,142	1,490	5,049
Rosin cwt.	108,741	89,620	112,692
.. .. value £	21,330	23,654	26,421
Tallow and stearine cwt.	99,245	81,020	61,029
.. .. value £	168,203	99,414	72,299
British and Irish produce—			
Alkali cwt.	629,771	644,144	560,834
.. .. value £	186,382	182,420	157,981
Bleaching materials cwt.	149,089	142,218	125,187
.. .. value £	48,246	43,116	47,447
Chemical manure	90,789	94,283	90,579
Drugs and medicinal preparations (unenumerated) ..	64,126	65,121	69,607
Other chemicals and medicinal preparations	164,266	171,847	177,352
Oil, seed tons	5,393	7,228	6,613
.. .. value £	126,175	148,955	134,922
Soap cwt.	31,992	27,738	36,766
.. .. value £	37,238	30,543	36,767
Painters' colours and materials (unenumerated) ..	105,900	109,025	119,391

Exports.

	May, 188	5 May, 1886	May, 1887
Foreign and Colonial merchandise—			
Bark, Cinchona	10,178	10,917	14,086
.. .. value £	49,566	48,837	47,749
Chemicals (unenumerated)	21,955	16,010	25,288
Cochineal	804	649	353
.. .. value £	5,280	4,525	2,418
Cutch and gambier	732	530	835
.. .. value £	17,721	13,029	21,378
Gum Arabic	4,157	3,613	2,963
.. .. value £	15,072	12,574	10,506
Indigo	3,982	1,722	3,488
.. .. value £	82,650	34,837	73,043
Lac (various kinds)	7,617	6,045	4,595
.. .. value £	24,431	16,078	13,411
Lard	3,043	13,957	1,583
.. .. value £	5,606	28,349	2,850
Oils, cocoa-nut	12,442	6,593	10,643
.. .. value £	18,631	8,822	13,903
.. olive	254	307	393
.. .. value £	11,925	13,185	16,979
.. palm	26,087	32,708	32,548
.. .. value £	37,278	32,380	31,719
.. petroleum	35,566	35,744	70,026
.. .. value £	1,867	1,550	2,552
Quicksilver	240,396	416,734	304,062
.. .. value £	17,792	32,281	27,195
Nitre (nitrate of potash)	1,377	739	5,721
.. .. value £	1,380	591	5,397
Spices, cinnamon	93,149	81,605	56,900
.. .. value £	3,581	3,941	2,312
.. pepper	1,135,977	1,741,083	932,300
.. .. value £	35,252	49,058	30,974
Tallow and stearine	17,583	15,113	56,479
.. .. value £	20,694	17,761	69,795

THE GERMAN MARKET.

HAMBURG, June 7.

THE condition of our market is similar in all respects to that which prevailed at the date of our last report. There has been no important movement in any line, and prices generally are well supported.

The quotations in this column are given in marks (11 $\frac{3}{4}$ d.) per 100 kilos. or per kilo. (1 kilo.=2 lbs. 3 $\frac{1}{4}$ oz.; 50 $\frac{3}{4}$ kilos.=1 cwt.). The prices in parentheses show the parity in London.

ALOES (CURAÇAO).—No supplies. Higher prices have been anticipated, but no changes have yet occurred.

BALSAMS.—*Copaiba* is steady; the present quotation is 3.40m. to 3.60m. (1s. 6d. to 1s. 8d.) according to quality. There is very little stock, and both arrivals and export supplies are small. The activity in the market for *Peruvian* continues, and prices are still advancing; fair quality is not obtainable under 10 $\frac{3}{4}$ m. to 11m. (4s. 8d. to 5s.). *Tolu* remains neglected; a small lot brought 2.80m. (1s. 3d.).

BARKS.—There is nothing new or of special interest to report in the *Cinchona* market. Business has been confined to small parcels. A lot of about 120 bales Lima sold well at 95m. (4 $\frac{1}{2}$ d.). Flat *Calisaya* is in good demand, but there is none offering. *Condurango* is unchanged, scarce, and firmly held at 3.25m. to 3.50m. (1s. 3d. to 1s. 6d.). *Quillaya* very steady; 50 tons are expected to arrive.

BEANS.—*St. Ignatius* are quiet: 105m. to 110m. (4 $\frac{3}{4}$ d. to 5d.). *Tonquin* very firm, but only small quantities of *Angostura* are offered.

BORAX (REFINED).—No confidence is manifested in the speculative movement. Second-hand holders asked 55m. to 58m. (25s. to 26s.). But now the article is reported somewhat weaker in tone.

CAMPHOR (REFINED).—Unchanged and weak, at 178m. to 180m. (80s. to 82s.).

ERGOT OF RYE without demand, fair *Russian* quoted at 2.30m. to 2.40m. (1s. to 1s. 3d.) according to quality.

GALLS.—*China* have been sold at 114m. (52s.).

OILS (ESSENTIAL).—*Star anise* is steady, but only in moderate request: 15.50m. (7s.) is demanded. *Cassia* remains unchanged at 5.50m. (2s. 6d.). *Peppermint*—H. G. Hotchkiss and the other brands have been very quiet, and the position of the article is about the same as last. The low prices in Japanese oil appear to have quite demoralised the article.

OILS (FIXED).—*Cod-liver* remains very dull; steam-refined Loföden at 80m. to 85m., and Finnmarken at 60m. to 65m. cask.

MUSK.—Our market is without supply of the *Cabardine* variety.

ROOTS.—*Jalap* is quiet but steady in price; arrivals of the new crop, partly of very spongy quality, were sold at 100m. (4 $\frac{1}{2}$ d.); prime old heavy root cannot be bought under 105m. to 110m. (5d.). *Ratania*.—Genuine *Payta* root is firm, with sales at 110m. to 140m. (5d. to 6 $\frac{1}{2}$ d.) according to quality. *Sarsaparilla*.—Vera Cruz very quiet, in consequence of the large supply, which numbers about 550 bales.

WAX.—*Japan* is weaker, and prime white squares can be had at 95m. (43s.).

LONDON DRUG STATISTICS.

The following figures refer to the stocks of the principal drugs in the Port of London on May 31, 1887, and to the imports and deliveries from January 1 to May 31, as compared with the same period of the preceding year:—

Article	Stocks		Imported		Delivered	
	1887	1886	1887	1886	1887	1886
Aloes	4,312	3,533	1,538	1,032	2,253	1,973
"	48	12	41	—	5	12
"	4	49	4	16	10	127
Anise, Star ..	293	323	117	62	63	174
Arrowroot ..	12,219	15,551	6,187	10,215	5,841	6,056
" bxs & tins	7,232	2,670	5,095	1,212	2,368	1,606
Balsams ..	738	488	376	231	329	311
Bark, Medicinal	9,553	6,309	14,447	11,643	12,767	9,379
cks & cs	50,671	57,696	19,590	17,035	23,385	17,081
srns, &c.	2,007	786	1,610	613	807	516
Borax	1,426	847	623	155	724	235
Calumba ..	4,917	6,675	3,017	1,994	4,276	2,443
Campbor ..	1,045	905	2,225	1,640	1,809	1,570
Cardamoms ..	430	384	10	50	20	—
Cocc. Ind. bgs, &c.	11	51	8	61	8	58
Cream of Tartar	67	20	162	61	187	54
Cubebbs	3,271	3,210	2,817	1,815	2,137	1,797
Galls, China ..	6,453	5,760	4,153	6,868	1,631	3,773
Trky & Prsn sks	166	326	89	263	112	87
Gum—	3,858	6,929	2,848	4,248	3,729	3,999
Ammoniac pkgs	12,137	20,276	6,162	21,783	9,400	10,808
Animi & Copal	669	651	1	370	109	329
pkgs	1,845	2,148	1,102	1,622	823	1,060
pkgs	4,661	5,987	2,311	5,285	2,405	3,145
Dragou's blood	136	137	74	76	74	69
Galbanum ..	9	10	1	—	1	5
Gamboge ..	95	142	119	162	131	159
Guaicum ..	61	29	30	4	19	13
Kino	84	145	8	9	35	29
Kowrie	664	1,664	671	860	873	1,223
Mastic	133	127	8	51	16	42
Myrrh	294	335	375	213	277	197
Olibaunum ..	3,684	5,474	2,935	2,147	2,698	1,580
Sandarac ..	1,371	1,467	789	594	664	905
Tragacanth ..	1,131	1,775	1,670	1,618	1,143	602
Ipecacuanha ..	14	167	138	242	185	197
Jalap	180	232	56	87	38	52
Lac Dye	7,668	7,925	28	100	203	293
Myratolanes ..	8,959	9,726	5,804	8,474	4,806	5,029
Nux Vomica ..	493	929	177	790	383	846
Oils—	195	272	110	211	90	224
Anise	223	215	210	277	86	228
Cassia	575	520	332	465	353	481
Castor	5,570	7,310	3,083	6,072	3,952	5,633
"	2,372	1,994	2,657	2,112	1,590	2,025
Cocoa-nut ..	804	1,950	2,091	6,584	2,124	5,952
cks, &c.	176	198	51	101	54	147
Palm	1,994	1,843	795	363	949	674
Opium	1,446	1,620	404	378	814	859
Rhubarb	261	355	76	168	240	145
Safflower ..	570	600	681	834	566	659
Sarsaparilla ..	620	519	1,279	389	1,521	580
Senna	68,742	64,545	28,044	27,190	19,267	20,640
Shellac	4,454	5,106	557	526	312	842
Sticklac	1,982	1,213	5,197	6,008	4,860	5,830
Gambier	1,182	2,403	1,318	1,657	1,475	1,373
Cutch	1,775	1,563	750	1,409	891	704
Turmeric	15	30	6	129	45	30
Vermilion, cts, &c.	943	1,356	335	812	561	546
Wax, bees' ..	1,351	1,227	1,132	1,016	1,114	1,257
cks & cs	100	105	11	117	—	16
cakes	1,143	1,755	454	1,220	658	1,226
Wax, Japan ..						



Linimentum Terebinthinæ.

SIR,—I am induced to offer some further remarks on the above subject, because what I have previously communicated in a paper read before the Pharmaceutical Society has been several times commented upon by writers in your journal, who seem to think that I may be able to explain or remove difficulties which they still experience in the preparation of this liniment. I must beg it to be distinctly understood, however, that I have no authority to say anything on other than my own responsibility; nor do I consider that any individual, nor even the Pharmacopœia Committee, can authorise a departure from clearly-defined instructions of the Pharmacopœia, as passed by the Medical Council. I greatly regret, therefore, to find that any member of our body should advocate such departure.

It will, I presume, be admitted that it is the duty of pharmacists, as dispensers of medicine, to interpret the official instructions given in the Pharmacopœia according to the best light attainable, and, by the exercise of the skill and judgment which they are assumed to possess, to carry out the instructions given, in producing and supplying what medical men prescribe. In the performance of this duty the pharmacist may conceive that by some modification of the instructions improvement might be effected in a product; and if he should be satisfied of the correctness of his judgment in this respect, it may be his duty to publicly explain the conclusion he has arrived at, so that those in authority may, if they think proper, avail themselves of the suggestion when the proper time arrives for doing so. But if every dispenser were at liberty not only to conceive but to adopt what he might consider an improvement in the mode of producing a prescribed remedy, there would soon—and the sooner the better—be an end to the vocation of pharmacy as a distinct department of the practice of medicine.

In your leader, May 28, you have pointed out what would be the effect of adopting any of the principal suggested alterations in the official process under notice, from which it appears that each one is subject to objection of quite as serious a nature as any that has been urged against the process as it stands.

The existing process may not be the best that can be devised, but I have no experience or knowledge of a better. I have explained how a good and sufficiently permanent and uniform emulsion, suitable for its intended application, may be produced by strictly adhering to the official formula, while at the same time I have pointed to imperfections which may arise from defective manipulation or the use of bad soap.

The facts that the official process requires the exercise of skilled manipulation, and judgment in the selection of suitable apparatus and materials, are, in my opinion, speaking as a pharmacist, not altogether unfavourable traits in its character. If pharmacists are unwilling to cope with or unable to overcome the slight difficulties that may sometimes occur in the preparation of this liniment, they are, I think, scarcely worthy of the professional name they assume. Such difficulties are chiefly ascribable to variations in the soap as met with in commerce, and this may apply, not only to degrees of alkalinity and extent of hydration, but also to the nature of the oil used in its preparation, for oils differ in the nature of their emulsifying property.

There is abundant evidence that the official process yields a product which, although it may not always, from causes stated, come up to an assumed arbitrary standard, adopted by some individuals, yet in skilful hands meets the requirements of its intended use.

I still have the samples I exhibited at the reading of my paper three months ago, and they are now in nearly the same condition as they were in then. One of them, made with a very alkaline soap, had then become a firm jelly, which would not run, and that soap, therefore, would of course be avoided in future. The others are, and have been ever since, as far as I know, semifluid emulsions, which can be readily poured from an ordinary bottle. I cannot say of them that after standing for some time they are of uniform consistence throughout, but they retain the emulsive character throughout, and a slight agitation at any time restores uniformity of consistence and appearance. I had made my samples with soap obtained from several different sources, and in only one instance has the result been decidedly unfavourable. Among the other eight samples, I find that two of them differ a little in appearance from the rest, being more liquid and less opaque or, rather, opalescent. This I have no doubt is also due to difference in the soap used.

The recently published Pharmacopœia is the first in which a process has been given requiring the use of soft soap in a preparation, the appearance and characters of which are largely dependent on the composition of the soap, and it is only now, as the result of experience, that this is fully appreciated. In any future revision of the Pharmacopœia I have no doubt it will be considered necessary to describe and define soft soap more fully and correctly than has hitherto been done.

17 Bloomsbury Square, June 7.

T. REDWOOD.

The Trade Association.

SIR,—I have been somewhat interested in the Trade Association since its formation, and think that it should receive the support of every one connected with the trade, and in writing the following need hardly say I do not at all wish to detract from or blame the good work and management of the present executive and their excellent secretary, Mr. W. F. Haydon; but it does appear to me that the expenses are out of all proportion to the amount of funds subscribed, and, to use a homely phrase, "One should cut one's coat according to one's cloth." From the balance-sheet of last year I gather that the legitimate income derived from annual subscriptions amounted to 554*l.*, and the travelling expenses of the executive committee, the travelling expenses and salaries of secretaries, auditors, &c., amounted to about 450*l.*, leaving a very small margin for, at any rate, one of the objects of the Association, viz., the defence of members prosecuted either by the Apothecaries' Society or for offences under the Adulteration of Food and Drugs Act. Under these circumstances I think it is absolutely necessary that the greater portion of the work now paid for should be replaced by voluntary work, and I feel sure there would be no great difficulty in finding some member of the trade who would undertake the duties of honorary secretary for at least one year, with an allowance for expenses out of pocket, and for some clerical assistance in the routine portion of the business. The number of the executive might be decreased, the auditors replaced by honorary auditors, and in this way a saving of between 300*l.* and 400*l.* a year might be effected. In addition to this, honorary secretaries might be appointed in each district, who would collect subscriptions from members and give information and reports to the executive committee. The legal expenses are naturally governed by the amount of work done, but a further saving might be effected in some cases by employing local solicitors, who might be posted up and assisted by the local secretaries. With strict economy and voluntary work, I believe the Association might have a successful future, and it is the opinion of many that the execu-

tive committee should hold its meetings in London, and that only members of the Association should be defended.

I am, your obedient servant,
Coventry, June 4. W. F. WYLEY.

The Minor Examination.

SIR,—As an old examiner I have read with some interest my friend Mr. Fletcher's letter on this subject, and the still more irate ones provoked by it.

It is a good thing that the actions of the "Board" should be criticised from time to time, and the annual meeting affords an excellent opportunity for drawing attention to any point which suggests inquiry. It is plain, however, that every new subject introduced without notice cannot be adequately discussed in the course of one sitting, and to my mind, the President very properly deprecated lengthened dwelling on a question which the meeting was not competent to settle, and which had already secured the prominence necessary to draw the attention of the Council to it.

Now to the question. The contention is that "shall" means "must"—i.e. that a candidate who has hopelessly failed, say in chemistry, *must* be examined in all the other subjects. I demur altogether to the proposition, or that it affords a useful and expedient reading of the by-law. The utility and expediency are on the other side, and it follows that common sense is ranged with them. Neither the candidate nor the public suffers from what the President called an "established practice," which (it may be worth while to say) is not necessarily illegal because it is not definitely authorised by a by-law. "Established course under the circumstances" would perhaps be a more correct expression, as not carrying so distinct a notion of frequency as "established practice."

If by-laws are to be so comprehensive that no possible course or action of a body of men specially chosen on account of their fitness shall be left to their collective discretion, their number would be infinite and their cumbersomeness overpowering. If the discretion is at fault, by all means let it be suggestively criticised. The criticism to be of service must, however, be exercised not only with calmness, but with some regard to things as they are, without bias or distortion.

The position is not fairly presented in the words "the Board of Examiners delegates to a single individual the discharge of a duty which, both by Act of Parliament and the Society's own by-laws, is a duty incumbent on every member of the Board;" or, again, "if the Council of the Society is of opinion that the qualifications of a candidate who comes up to be examined in six subjects can be fairly and satisfactorily determined by one examiner in one subject, by all means let the sixth section of the Pharmacy Act be repealed, and a new by-law be enacted for that purpose," and I am slow to believe that it is seriously put forward by an acute critical mind.

I yield to no one in my sympathy for a candidate who has honestly done his best, as many past candidates would doubtless be willing to testify; but I think that in the present instance a very natural yet not fully-informed sympathy has tended to obscure and to limit the view of a usually clear perception.

Yours faithfully,
15 Laurence Pountney Lane, JOHN MOSS.
London, E.C., June 4.

SIR,—Mr. Wright, with homœopathic irony, seems to conclude that Mr. Fletcher has no case at all, and because he has very commendably brought the matter to the notice of the Society in annual meeting assembled, Mr. Wright accuses him of want of common sense, and compares his method to bludgeon warfare. For my part, I am much in sympathy with Mr. Fletcher's efforts for a fairer examination. I, like him, have known several fully competent young men rejected on their first or second subject after much expense and trouble.

I am not aware if Mr. Wright has tried to pass, or has passed, any examination other than pharmaceutical, but if he had he would feel that common sense is wide enough to embrace ideas not strictly limited to those of the Pharmaceutical Society. But perhaps Mr. Wright is pleased with the double-barrelled office of president-examiner.

Medical and dental examinations are conducted on far more rational and common-sense principles. A candidate in

these is treated as a gentleman should be, and is allowed to try all the subjects without leaving the room. He goes for the time by a number. Shortly after examination, he is informed by note if he has failed. His name is not called boldly out before examiners and examined by the under-secretary, as I have heard it at Bloomsbury Square—much, I should think, to the candidate's annoyance. The examiners are paid for their trouble, and do not appear to shirk it. This is much more satisfactory to the candidate, who, if he fail, has a good idea in what subject.

Decidedly the Pharmacy Act specifies six subjects as the Minor examination; it never contemplated the candidate being rejected and sent out in the first subject—which is no examination at all. How can such a candidate be said to have failed in his examination? Such an established practice is no regularity, and therefore calls for disestablishment. At any rate, having studied fairly in all subjects, and having put himself to fair expense and trouble on account of examination, it is only due and fair to the candidate (as in all other examinations that I know of), in the light of common sense, that he should be fairly examined.

Mr. Fletcher does not say the repealing of the Act in its sixth section overcomes the difficulty; he simply says it will be legal, but unjust nevertheless. It is against injustice we protest, whether legal or illegal.

Yours truly,
L.D.S. (112/41)

SIR,—I am sure you will earn the thanks of hundreds of your readers by your outspoken remarks anent the first meeting of the Pharmaceutical Council, as reported in last week's CHEMIST AND DRUGGIST. It was boasted that the infusion of new and younger blood into our governing body would result in the introduction of reforms compatible with the exigencies of the time. But disappointment stares us in the face. Already has the gag been applied, and the "young members," so unsophisticated, of course, so unused to the secret conclaves and clever methods of the fathers of the Council when inconvenient questions crop up, had to swallow the pill prepared for them by Messrs. Schacht, Bottle, Car-teighe & Co. Messrs. Evans, Hampson, Newsholme, Radley, Richardson, Symes, and Woolley deserve to be gratefully remembered for opposing the proposition to go into committee for the discussion of so important a question as the conduct of the examinations. It is a public matter, a matter affecting the whole trade, and should, therefore, be openly discussed. Outsiders will now very naturally conclude that Mr. Carteghe and his supporters had something in view to which they feared to have publicity given; and surely Mr. Cross is not so unversed in public affairs as to be afraid he "might say something which he would regret when he saw it in print." Many will regret to see the names of Southall, Greenish, and Gostling among those in favour of secret committees. They, at all events, should be found on the popular side, and supporting freedom of speech; but I suppose it is but another illustration of an old adage, that "evil communications corrupt good manners."

Yours truly,
Leominster, June 8. M. J. ELLWOOD.

Eucalyptus Oil.

SIR,—My attention has just been directed to a paragraph on the above in your issue of May 28, which you quote from Messrs. Schimmel & Co.'s report, containing a statement you will perhaps allow me to correct as being not quite in accordance with the real facts.

In the paragraph in question I find the following:—"Both the Californian and the African varieties (of eucalyptus oil) contain a considerable proportion of eucalyptol, a body which is absent from the product of the Australian *Eucalyptus amygdalina*, and it cannot therefore be denied that the value of the Australian oil is below that of the rival products."

I can only characterise the foregoing as distinctly erroneous, both as to the premiss and the conclusion based thereon, although perhaps the commercial *raison d'être* of the paragraph I am speaking of is not very hard to discern.

I have no desire to split hairs about the matter, or to take up space in your columns with unnecessary details, so I will merely say that I have never yet come across any samples of genuine Australian oil of *E. amygdalina*—and I have examined some hundreds during the last fifteen years—in which eucalyptol was absent, or even present in small quantity only. More-

over, my experience teaches me that, speaking in general terms, the Australian oil contains of eucalyptol about one-fourth more than is generally present in the Californian variety, and one-fifth more than the African oil can truthfully lay claim to.

I am, sir, yours truly,
W. LASCELLES-SCOTT.

DISPENSING NOTES.

[The opinion of practical readers is invited on subjects discussed under this heading.]

An Examination Prescription.

SIR,—I have found the following method produce the best mixture. Put the tinct. card. co. in a dry mortar, and drop the pulv. tragac. nicely in the centre. Mix, and add 3ij. of water to make a smooth jelly. Then add the bismuth, and sod. bic., and rub well to divide the jelly, the syrup and remainder of the water to be added gradually. I must express surprise at a "Senior" suggesting the omission of half the tragacanth, more especially as the mixture is not quite so thick as the B.P. mucilage, and *gum* is signified by the prescriber. Neither do I admire the use of hot water, as suggested by "Ecosse." I think it is rare that any explosion occurs, under ordinary circumstances, between bismuth. subnit. and sod. bicarb.

Yours truly
Torquay, June 7. W. SMITH.

SIR,—The difficulties experienced in the manipulation of the prescription quoted by "Ferri Sulph." seem to be rather exaggerated. It is a favourite prescription of Sir Andrew Clarke's. My method of dispensing it is, first to pour the tincture into the bottle, then the tragacanth, as in making the mucilage. After shaking, add *quickly* about 3iij. water. Now take a mortar and mix the powders, gradually add the mucilage, stirring all the time, and pour back into the bottle. Rinse the mortar with the rest of the water, then add the syrup. A bottle was made on May 28, and well corked. Up till the present time the bottle has shown no disposition to burst, nor has the cork flown out. I do not think the prescription was given to test the candidate's knowledge of the reaction (which must be very slight, as I have never had a bottle burst yet), but to see how many flakes he could produce. "Senior" is mistaken as to the tragacanth being too much, and an examiner would smile (or frown) if he suggested altering the composition of the prescription.

Yours, &c.,
Burnham, June 6. A. J. HEALD, M.P.S.

SIR,—I beg to differ from your correspondent "Ecosse" with regard to the "point" of the prescription of bism. nitrate and sodium bicarbonate, given by "Ferri Sulph." One of our physicians frequently writes such a prescription, and of many hundreds that I have dispensed I remember but one explosion. This was caused by the bottle being placed near the fire. I believe the manipulation of the tragacanth to be the "point" of the prescription.

Yours truly,
HEDER.

Dessertspoonful v. Two Teaspoonfuls.

SIR,—This question is an important one, and should be answered authoritatively at once. I asked the leading physician of London what he intended when he prescribed a dessertspoonful. His reply was, "Three teaspoonfuls."

This should be the common sense of the word. One teaspoonful, two teaspoonfuls, a dessertspoonful, a tablespoonful, for a dose.

Yours very truly,
Kensington, W., June 6. W. H. C. (112/28.)

SIR,—I construe 3ij. as two teaspoonfuls, for this reason—that it is advisable that medicines should be measured out by graduated measures rather than ordinary spoons, and, as measures are not usually marked dessertspoonful I think the expression should not be used unless where written in full on the prescription.

Yours truly,
W. S. (113/3.)

SIR,—In reply to "Ecosse," I beg to state that I do not consider 3ij. (or two teaspoonfuls) and a dessertspoonful to be synonymous; or, as he puts it, "as much alike as 2s. 6d. and half a crown." Since reading his letter I have measured six dessertspoons obtained from various sources, and find that three of them hold 3iij., and three 3iiss, respectively. Surely "Ecosse" will agree with me when I say that when 3ij. is prescribed, and 3iiss.—or, to take the average, 3iij $\frac{1}{2}$ —is given, that the difference is appreciable, being, in fact, an excess of about 62 per cent. over the intended dose.

I am, sir, yours respectfully,
COTTONOPOLIS. (113/61.)

Digitalis and Potass. Bicarb.

SIR,—Can any of your readers inform me as to the reason why the following prescription, which when dispensed is almost colourless, should on standing change to a brownish colour with a slight sediment, viz.—

Potass. bicarb.	..	..	..	..	3iv.
Tr. digital.	..	..	..	..	3ss.
Aq. flor. aurant. ad	..	..	..	..	3vj.

The medical gentleman for whom it was dispensed appeared to think it had been wrongly dispensed, but on my making it up a second time I had the same result. I am curious to know if any chemist has had a similar experience. Can it be that the potass. bicarb. contained a trace of iron?

Yours truly,
MULTUM IN PARVO. (112/45.)

[Bicarbonate of potash in aqueous solution slowly changes to subcarbonate, and the action of the subcarbonate upon the digitalis may account for the change. Orange-flower water is frequently contaminated with copper or other metal. If such is the case with "Multum's" stock, the colouration may be due to this in part. But these are points which can only be settled by experiment. He should test his bicarbonate for iron, and the water for metals. Also ascertain if the mixture becomes coloured when it is made with distilled water.]

Colocynth and Blue Pill.

SIR,—I have great difficulty with the following pills:—

Pulv. ext. coloc. co.	..	..	..	..	gr. ij.
Pil. hydrarg.	..	..	..	..	gr. j.

They take a long time to dry sufficiently hard to coat, and while drying they repeatedly go out of shape, necessitating another rounding process. I have tried all ordinary expedients, including the liq. potassæ and water, as recommended in the Diary, but none seem suitable.

If you will kindly favour me with your advice, I shall feel greatly obliged.

I am, sir, yours truly,
SEIDLITZ. (113/29.)

[Mass upon a hot iron-plate with as little water as possible.]

A Quinine Mixture.

SIR,—What is the precipitate in the following mixture—is it pure quinine or quinine acetate, and can the prescription be prepared without causing a precipitate?—

Potass. acetatis	..	..	..	..	3vj.
Quinin. sulph.	..	..	..	..	gr. 24
Acid. sulph. aromat.	..	..	..	..	3j.
Inf. digitalis ad	..	..	..	..	3vj.

Yours, &c.,
DISPENSER. (111/15.)

[The precipitate formed in this mixture is quinine acetate. There is no practicable means of dispensing the prescription without the precipitate. The prescription affords an excellent illustration of crystallisation. An experiment which shows the formation and growth of stellate tufts of quinine acetate may be made as follows:—Dissolve 4 grains of quinine in $\frac{1}{2}$ oz. of water and 5 drops of acid. sulph. dil. Add to a drachm of this in a test-tube a solution of acetate of potash (1 in 8) until the precipitate formed redissolves. In a few minutes specks appear in the solution; these gradually increase in size until the contents of the test-tube are perfectly solid. The experiment is a very interesting and beautiful one.]

LEGAL QUERIES.

39/112. *A. B. C.*—You have stated the facts rather carelessly. For example, you tell us you were in business in 1886-7-8-9. The position is as follows:—If you were in business as a chemist and druggist previous to July, 1888, and can get a duly qualified medical practitioner or magistrate to make a declaration to that effect from his own knowledge on your behalf, you can claim registration on payment of five guineas. For forms of application apply to the Registrar, 17 Bloomsbury Square. We should judge, however, from what you tell us that you cannot properly make the claim. The fact that you were apprenticed to a chemist is of no legal importance.

51/112. *W. L.*—The diploma of the Irish Pharmaceutical Society is not accepted in Great Britain as authorising registration.

10/113. *F. W.*—Medicines bearing patent-medicine stamps can only be sold legally by persons holding a patent-medicine licence.

33/113. *Attraction.*—If you claim a proprietary right in the medicine it becomes liable to medicine-stamp duty. The adoption of a fancy title for the pills would probably be construed as claiming a proprietary right. Your registration of, or attempt to register, the title would leave no doubt about the matter. Any attempt to prevent other people using the same title would likewise prove that you claimed a proprietary right. It is probable that you would not succeed in stopping another maker unless you first registered your title as a trade-mark. (2.) You are not at liberty to use methylated spirit for any compound except those specifically named—i.e. soap, compound camphor, aconite, and belladonna liniments—without the express sanction of the Board. See this journal, January 1, 1887, page 17.

69/113. *Castor Oil.*—We have previously stated in this journal that we do not believe that the proprietors of Clarke's Blood Mixture can get any court on earth to say that the title "Blood Purifying Mixture" is an infringement of their title, provided that there is no evidence of a colourable imitation in the style of get up.

MISCELLANEOUS INQUIRIES.

109/80. *Q. V.*—*Magnolia Balm* is said to consist of carbonate of zinc, glycerine, and perfumed water. An analysis of a 3½-oz. bottle showed the contents to be 262 grains of carbonate of zinc, coloured with carmine, 2 drachms of glycerine, and the rest water perfumed with bergamot and citron. Chandler gives the composition as glycerine, 8 parts; perfumed water, 100 parts; and oxide of zinc (coloured with cochineal), 15 parts.

110/30. *Apprentice* (Edinburgh).—Precipitated chalk is sold for Spanish Whiting.

109/73. *Inquirer.*—*Kieselguhr* is an infusorial earth which is principally used in the manufacture of dynamite. It is a white powder, and, as it consists of the skeletons of diatoms, is of a siliceous character and well adapted for making polishing soap. Deposits of it are found in Aberdeenshire. *Balm of Columbia.*—Borax, 3j.; glycerine, 3iss.; oil of rosemary, m̄xv.; rectified spirit, 3ij.; water, 3xiv. Dissolve the borax in the water and glycerine, and the oil in the spirit; mix the solutions and filter.

110/8. *Durham.*—*Tartaralime* is a cream of tartar substitute, and consists of acid sulphate of potash, with or without starch. Grocers sell it. We do not recommend the formula for baking powder given in reply to "S. T. N. Y." He required something to sell at 4d. a lb. wholesale, in competition with a "cutting" firm.

110/17.—*D. B. McD.*—In bleaching sponges you should not leave them in the permanganate bath for half an hour. Dip them repeatedly in it for two or three minutes, and add more acid if there is a tendency for the bath to become muddy and the sponges brown. Do not use ferrous sulphate.

Doremus's Method for Estimating Urea.

Dr. W. Stewart (Leith) sends us the following note:—

"The test of Dr. Charles A. Doremus (Professor-adjunct to the Chair of Chemistry and Toxicology in Bellevue Hospital Medical College) for urea is described in the *American Medical News*, vol. 46, p. 360. The apparatus is a glass tube with two limbs meeting at an angle of 45°, a longer and a shorter, the longer graduated and closed, and the shorter open and with a bulb on it. The longer limb is filled with the hypobromite solution, and 1 c.c. of urine is injected slowly into it by means of a nipple pipette. The evolution of nitrogen takes place, and the fluid is displaced into the bulb and the amount of nitrogen read off from the graduated tube. Two forms of tubes are to be had from the makers, Eisner & Amend, Third Avenue, and 18th Street, New York, one graduated to read fractions of a gramme; and the other to show grains of urea in a fluid ounce of urine.

"The hypobromite solution is prepared according to the formula of Knop, which is as follows:—

"*Knop's Formula* in Fresenius's *Zeitschrift f. Analyt. Chem.*, vol. ix., 2, p. 225.—Sodium hypobromite is obtained by dissolving 100 grammes of sodium hydrate in 250 c.c. of water, and leaving the solution to cool before adding 25 c.c. of bromine.

"Dr. Doremus states that the caustic soda solution should always be in excess, and that great accuracy in the amount of bromine is not so necessary."

Mr. F. H. Alcock also sends us the following:—

"This method for the estimation of urea is one which has recently made its appearance in this country. Dr. Chas. Doremus, of New York, is the originator of the special apparatus required, but the principle of the process has been used for the estimation of urea in urine, &c., for some years. Dr. Saundby, physician to the General Hospital of Birmingham, was the first who suggested its use to English practitioners. This he did at a series of post-graduate lectures on Bright's disease, which were delivered before the members of the Midland Medical Institute early this year. The apparatus is very simple, and the directions for its use are equally simple, and the results obtained are sufficiently near the truth to recommend its use for bed-side testing to the busy practitioner.

"The pipette A consists of a tube bent at the point and having at the opposite end an indiarubber teat. The capacity of the pipette to the mark is 1 c.c. B is a graduated tube, and it is so graduated as to indicate from the volume of N gas evolved from 0 to 3 per cent. of urea in the 1 c.c. of liquid taken. That is, each graduation represents 1 m.g. of urea, and this quantity multiplied by 100 gives the per cent. of urea present. The solution used to produce the decomposition is either of hypobromite of sodium or of hypochlorite of sodium (U.S.P.). In the former case the solution is poured into the asterisk-shaped generator up to the asterisk and diluted until the tube is filled, leaving, of course, space in the dilated portion for the displacement of liquid by the gas evolved. The U.S.P. solution need not be diluted. The pipette charged with the 1 c.c. of liquid to be tested is placed into the tube so that the curved point reaches well within the bend of the graduated tube. The indiarubber nipple is then pressed slowly, and decomposition of urea and generation of gas begin at once. Care must be exercised at this particular stage of the

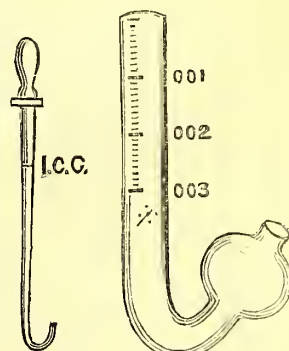


FIG. A.

FIG. B.

manipulation. In a minute or two the reaction is complete, and the gas which collects above the surface of the liquid may be read off.

"Comparative experiments made with this and other ureometers show that with care at least 90 per cent. of the actual urea present can be indicated by this method. It is plain, if care be not exercised, that the air in the nipple may be forced into the gasometer as well as the liquid which is being tested, and thus introduce an error which may be great.

"The apparatus can also be used for the estimation of sugar in urine by adopting the fermentation method with yeast and graduating the closed end of the tube, so that the quantity of carbonic anhydride evolved may represent the theoretical quantity of glucose from which the gas has been produced."

112/6. *Pharmacien*.—To prevent solidification the green corn cure should be made with collodion of three-fourths the usual strength.

109/69. *Veterinary*.—Carbolised Vaseline (1 in 16) is used for anointing castrating clams.

110/55. *Phenol*.—Carbolic Disinfecting Powder is made by mixing 10 per cent. or more of crude carbolic acid with such an earthy powder as kaolin or kieselguhr and colouring with Armenian bole.

111/49. *L. S. H.*—Try a weak solution of iodine for evanescent ink. It acts by combining with the starch which is used in facing glazed paper.

112/49. *A. Burns*.—You will find the information you require on another page.

112/71. *Salts*.—If the Epsom salts contains sulphate of zinc, you may detect it by dissolving a few grains in two drachms of distilled water, add a few grains of chloride of ammonium, then solution of ammonia carefully. If zinc is present, it will be precipitated, and will dissolve in excess of the reagent. Sulphuretted hydrogen will throw down a white precipitate from this mixture.

112/52. *J. C. Earl*.—Preservation of Decoctions and Infusions.—You do not mention whether it is concentrated or ordinary decoctions that you wish to preserve. For the former 30 oz. of rectified spirit to the gallon is generally sufficient, but some require 40 oz.

113/30. *Provincial*.—Aniline Marking Ink.—See reply to "J. B." in our issue of April 30, page 543. The object to be aimed at in making the solution of black aniline is to incorporate with it mordant, which will fix the ink to the fabric, and prevent it spreading. Certain metallic chlorides are used for this purpose—such as cupric chloride and magnesium chloride. We have had fairly good results with the latter. Try it along with cupric chloride, using a little acetic acid to assist the solution of the aniline black. Crawshaw's black is a suitable one to work with.

112/22. *Evans, N. B.*—White hair is unaffected by peroxide of hydrogen because it contains no colouring matter. The hair must be dyed to make it a golden colour. Some harmless thing such as decoction of saffron or turmeric might be tried. The hair should have recently been washed.

112/33. *F. W. (Liverpool)*.—Antiseptic Tooth-wash.—We have given the following formula frequently:—Quillaia bark, $\frac{1}{2}$ oz.; S.V.R., $3\frac{1}{2}$ oz.; water, 5 oz.; oil of wintergreen, 30 minims. Macerate ten days. At the same time, macerate cochineal, 8 grains; peppermint water, 4 oz.; glycerine, 2 oz.;

filter both and mix. Make up to 24 oz. with a mixture of spirit 1 part, and water 4 parts.

113/15. *Thulla Hill*.—Foot-rot Ointment.—Burnt alum, $\frac{3}{8}$ ss.; perchloride of mercury, gr. x.; carbolic acid, 5ij.; vaseline, $\frac{3}{4}$ vj.; precipitated chalk, 3ij. Rub the powders well together and incorporate the vaseline. This correspondent asks for a formula for "Stock's liniment, which he is often asked for by Spaniards from South America." Is Stoke's liniment meant? A formula for it will be found on page 599 of the present volume (97/15.)

1/114. *A. L.*—We have no information which would enable us to state the superiority of either English or French seltzogenes. The fact of one bursting is not a sufficient basis for a case, even if you knew the maker. We have never heard of any complaint against any of the seltzogenes the advertisements of which have appeared in this journal.

113/11. *J. Wallsgrove*.—Skeleton Leaves are made by digesting the leaves in solution of soda for a varying time, according to the texture of the leaves. A mixture of milk of lime and chlorinated lime is sometimes used. Chlorinated lime bleaches, and peroxide of hydrogen is used for the same purpose.

112/56. *A. Scgg*.—Crystoleum Work.—You will get materials and full information regarding this work from any artist's colourman. Briefly the process is as follows:—A convex glass is taken and a photograph mounted upon it, the face being pasted on the concave side of the glass. In a day the mount is sufficiently dry to allow the back of the photo to be rubbed thin with fine sand-paper. When this is done the photo is ready to be rendered transparent by means of crystoleum or medium (wax is used hot for this purpose, or a mixture of castor oil and Canada balsam, equal parts, may be used instead). The photo is then ready to receive the colours. These are oil colours, and they are of course applied to the back of the photo. Full directions are given with the materials. 7s. 6d. will buy a set.

112/40. *P. V.*—Ammon. Carb. Cryst.—This is obtained by dissolving the ordinary carbonate in alcohol saturated with ammonia, and allowing the solution to evaporate slowly.

Books.

112/5. *Wint. r.*—Scoffern's "Chemistry of the Soils" (Bell & Dalby), though an old work, may suit you. You should read Warrington's "Chemistry of the Farm" (Bradbury, Agnew, 2s. 6d.). See also third edition of Sutton's "Analysis."

112/74. *Eucalyptus*.—It is difficult to say what are the best books, seeing that you do not tell us what you require them for. In materia medica you can have nothing better than Flückiger and Hanbury's "Pharmacographia" (Macmillan, 21s.); and in pharmacy, Remington's "Practice" is excellent (Burroughs, Wellcome & Co., 21s.). But if you want books for examination purposes, something lighter, such as Bentley's or Wills's "Materia Medica," and Gerrard's or Proctor's "Pharmacy," would suit you better. Cassell's "Family Physician" (Cassell, 32s.) is an excellent popular work, which is suitable for a chemist's library. Begbie's "Medical Information and Advice" (Nelson, 2s. 6d.) you should certainly have. It contains sound advice.

Information Wanted.

[Replies to the following requests are solicited by Correspondents of THE CHEMIST AND DRUGGIST.]

107/2. Oil of box; where procurable.

50/110. Peet Brothers, makers of hearth-cleaners.

110/18. Soap-like disinfecting tablets used in clubs and hotels and such public places. Maker's name and address.

113/17. Wool fat: where obtainable in quantity.

PURE OXIDE OF ZINC (HARRIS'S)

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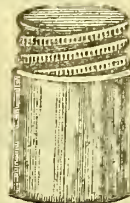
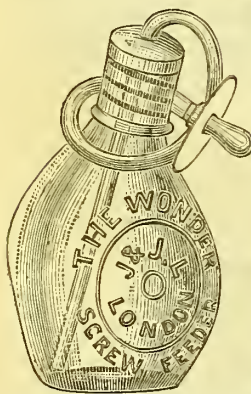
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6/ 7/ 8/6 9/6 10/6 per gross.

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1/2 oz., 9/; 1 oz., 10/; 2 oz., 13/; 3 oz., 16/ gross.

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6-oz. and 8-oz., 8/ per gross; 3-oz. and 4-oz., 7/ per gross; White Phials at very low prices; Stoppered Rounds, Pomades, Graduated Measures, Panel Bottles, Castor Oil Bottles, Soda Water and Mineral Water Bottles, and all other kinds at very low prices. Write for Prices and see our Samples before ordering of any other house.

Bankers—London and Westminster Bank. Established upwards of 50 years.

W. KEMP & SON,

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SEED CRUSHERS, IMPORTERS, AND MERCHANTS.

SPECIALITIES—

Crushed Linseeds, Honey, Beeswax, Essence Lemon, Non-Freezing Norwegian Cod Liver Oil, Gums, Opium, Genuine Ground Drugs and Spices Insect Powder, Chemicals, Essential Oils, &c.

Send for list of above quoted at close carriage-paid prices.

SPONGE.

M. PETERSON & CO., Importers,

66 SOUTH JOHN STREET,

LIVERPOOL.

For Home, Foreign, and Colonial Markets.
Wholesale only.

Registered



Trade Mark.

**BREFFIT'S**

(LIMITED)

AIRE AND CALDER BOTTLE CO.

OFFICES AND SHOW ROOMS—

83 UPPER THAMES ST., LONDON.

Registered



Trade Mark.

**TO CHEMISTS, SURGEONS, HOSPITALS, ETC.
SPECIAL NET PRICE LIST.****DISPENSING BOTTLES,** GOOD QUALITY, PLAIN OR GRADUATED,
FLAT, OVAL, OR SQUARE.

Per Gross	Size	2	3 & 4	6 & 8	10	12	16	20	40 oz.
Price		5/6	6/6	8/	12/	13/	14/	18/	30/

WHITE FLINT DISPENSING VIALS, ORDINARY.

Per Gross	Size	1 & 2 dram.	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	3	4 oz.
Price		2/8	3/	3/6	4/3	4/9	5/6	6/6

ROUND-SHOULDERED VIALS, ACTINIC GREEN, WHITE FLINT,
OR GREEN FLINT.

Per Gross	Size	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	3	4	6	8	10	12	16	20 oz.
Price		3/6	4/	5/	5/6	6/	7/	9/	10/	13/6	15/	20/	22/

POISON BOTTLES, FLUTED, FLAT, OR SEXAGON, DARK BLUE OR
ACTINIC GREEN.

Per Gross	Size	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	3	4	6	8	10	12	16	20
Price		4/	4/6	5/	6/	7/	7/6	9/	10/6	13/6	16/	18/	22/

PANEL FLATS, WHITE OR GREEN FLINT.

Per Gross	Size	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	3	4	6	8	10	12	16	20 oz.
Price		5/	6/	7/	7/6	10/	10/6	12/6	13/6	18/	21/	24/	33/

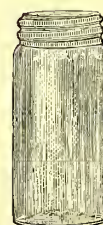
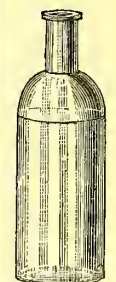
GRADUATED MEASURES, CONICAL OR CYLINDRICAL.

Per Dozen	Size	$\frac{1}{2}$	1	2	3	4	6	8	10	12	16	20	24	32	40 oz.
Price		3/6	4/	5/	5/6	7/	8/	8/	10/	11/	12/	14/	16/	18/	20/

Stamped Measures (Verified), 3/ per doz. extra net.

POMADES, WITH BRIGHT NICKEL SCREW CAPS, IN DIVISIONED CARD BOXES
OF 1 DOZEN EACH.

Per Gross.		TALL SERIES.					SQUAT SERIES.				
		1	$1\frac{1}{2}$	2	3	4	1	$1\frac{1}{2}$	2	3	4
	White Flint	12/6 13/6 14/ 16/ 18/					13/6 14/6 15/ 18/ 20/				
	Glass	13/6 14/6 16/ 18/ 20/					14/6 15/6 17/ 20/ 22/				
	Blue or White Opal										

DELIVERY FREE to RAIL or STEAMER, LONDON.*Large Assorted Stocks of all kinds of Bottles.*


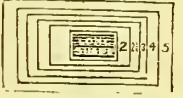

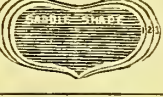
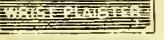

IMPORTANT TO PHYSICIANS, SURGEONS, & CHEMISTS.


ROYAL BALSAMIC

PLAISTERS

MANUFACTURED BY WILLIAM MATHER,

Are manufactured of the same kind of ingredients as those sanctioned and ordered by Dr. Andrew Smith, Director-General of Her Majesty's Army and Navy Ordnance Medical Department, for the use of the Soldiers and Marines in Scutari Hospital.

LEATHER PLAISTERS.		No.	Full Size of Leathers.	Retail Prices.	Per doz.	Royal Balsamic Plaster.	Cod Liver Oil.	Plain Plaster.	Emp. Roborans or Calefaciens.	Emp. Belladonna. No. 1.	Emp. Belladonna. No. 2.
			Inches.	d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Heart Shape	.....	1	3 x 4½	1 size.	"	0 8	0 8	0 8	0 8	1 4	1 0
	.....	2	4½ x 6	1½ "	"	1 0	1 0	1 0	1 0	2 0	1 6
	.....	3	4½ x 7½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	3½	5½ x 7½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	.....	4	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
Long Shape	.....	1	2½ x 4	1 "	"	0 8	0 8	0 8	0 8	1 4	1 0
	.....	2	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	2½	4½ x 8½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	.....	3	5½ x 9½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	.....	4	6½ x 11	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
Oval Shape	.....	1	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	.....	2	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	.....	3	7½ x 9½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
Saddle Shape	.....	1	6½ x 12½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
	.....	2	7 x 15	8 "	"	6 8	6 8	6 0	6 0	12 0	8 0
	.....	3	8 x 16	12 "	"	8 8	8 8	8 0	8 0	15 6	12 0
Wrist	.....	1	3 x 10½	3 "	"	2 3	2 3	2 0	2 0	...	...
Knee	.....	2	4½ x 15	6 "	"	4 6	4 6	4 0	4 0	...	...

BREAST PLAISTERS.		No.	Size of Leather	Retail Prices.	Per doz.
				d.	s. d.
 Emp. Plumbi, for Ladies' Breasts .....	.....	1	Diam. 6½ in.	4 size	2 8
	.....	2	" 7½ "	6 "	4 0
	.....	1	" 6½ "	" "	4 0
	.....	2	" 7½ "	" "	6 0
BREAST PLAISTERS.		No.	Size of Leather	No. 1 Quality. Per doz.	No. 2 Quality. Per doz.
				s. d.	s. d.
Emp. Belladonna, for Ladies' Breasts .....	.....	1	Diam. 6½ in.	5 4	4 0
	.....	2	" 7½ "	8 0	6 0
	.....	1	" 6½ "	8 0	6 0
	.....	2	" 7½ "	12 0	9 0

HOSPITAL PLAISTER, on Black Cloth, 16 in. wide, doz. yds. 8/0
 " " on White " " " 8/0
 Every other description of Plaster used in Pharmacy or Private Formule spread on any material, to suit any climate.

PLAISTERS, SPREAD.—Prices per Dozen Yards. 16 Inches in width.

NAME	Glazed Cloth	Unglazed Cloth	Linen	Swans-down	Mole-skin	Skins of Leather
Emp. Adhesivum Opt...	4/0	5/6	10/0	10/0	20/0	4/0
" Adhesivum	3/2	..	..	..	..	..
" Ammon. c. Hydrarg ..	16/0	..	..	30/0	36/0	5/6
" Antim. Pot. Tart...	10/0	..	..	24/0	30/0	4/0
" Belladonna	13/3	15/0	24/0	24/0	30/0	5/6
" Calefaciens	5/8	6/4	11/3	11/3	22/6	..
" Cerat Saponis	6/6	7/6	12/0	12/0	22/6	..
" Dreadnought	9/0	10/0	14/0	14/0	24/0	4/6
" Elemi	9/0	10/0	14/0	14/0	24/0	4/6
" Ferri	9/0	10/0	14/0	14/0	24/0	4/6
" Galbani	14/0	..	..	24/0	30/0	4/6
" Hydrarg.	14/0	15/0	18/0	18/0	27/0	4/6
" Iodine	16/0	..	..	30/0	36/0	5/6
" Opi	18/0	20/0	27/0	27/0	36/0	5/6
" Picis Co.	11/0	12/0	15/0	15/0	24/0	4/6
" Plumbi	5/6	6/6	12/0	12/0	21/0	4/0
" Potass. Iodid.	16/0	..	..	30/0	36/0	5/6
" Resinae	5/8	6/8	12/0	12/0	21/0	4/0
" Roborans	5/0	5/8	10/0	10/0	20/0	4/0
" Saponis Alb.	5/6	6/6	12/0	12/0	21/0	4/0

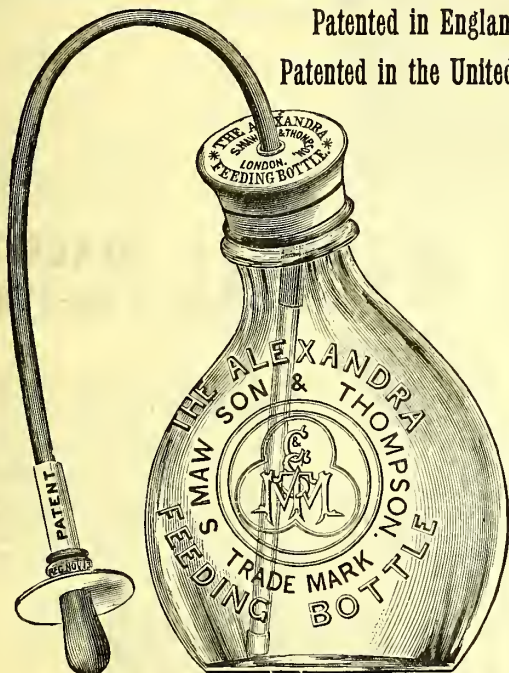
MANUFACTURED BY W. MATHER,
DYER STREET, HULME, MANCHESTER, ENGLAND.

PRICE LISTS SENT ON APPLICATION.

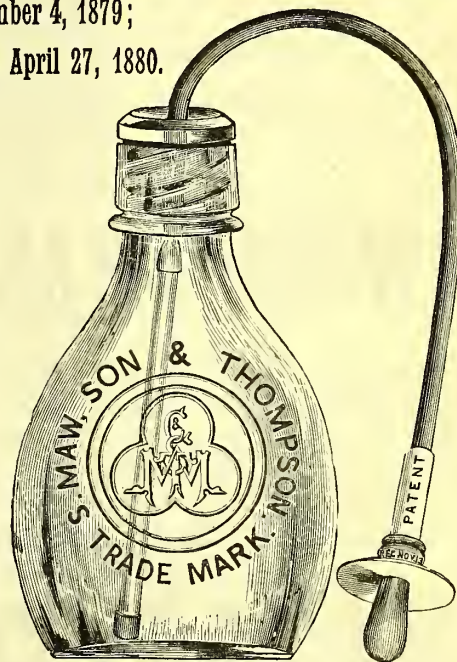
London Wholesale and Export Agents: Messrs. MACE & HALDANE, 77 Milton Street, London, E.C.

S. MAW, SON & THOMPSON'S FEEDING BOTTLES.

Patented in England, December 4, 1879;
Patented in the United States, April 27, 1880.



THE ALEXANDRA.
(Earthenware Cap.)



THE EXPORT.
(Glass Screw Stopper.)

	White Fittings.			Black Fittings.		
Alexandra, China or Wood Top Corks ... per doz.	3/8	—	—	4/3	—	—
Alexandra, 2nd Quality, Wood Top Corks ,,	3/-	—	—	3/6	—	—
Alexandra, Earthenware Caps..... ,,	—	8/-	11/-	—	8/6	12/-
Alexandra, Earthenware Screw Stoppers ,,	—	—	11/-	—	—	12/-
Alexandra, Glass Screw Stoppers ,,	4/-	8/-	11/-	4/6	8/6	12/-
Export, China or Wood Top Corks ,,	3/6	—	—	4/-	—	—
Export, 2nd Quality, Wood Top Corks ... ,,	2/9	—	—	3/3	—	—
Export, Earthenware Caps ,,	—	7/3	—	—	8/-	—
Export, Glass Screw Stoppers ,,	4/-	7/6	—	4/6	8/-	—

FOR FURTHER PARTICULARS SEE QUARTERLY PRICE CURRENT, PAGES 46 AND 47.

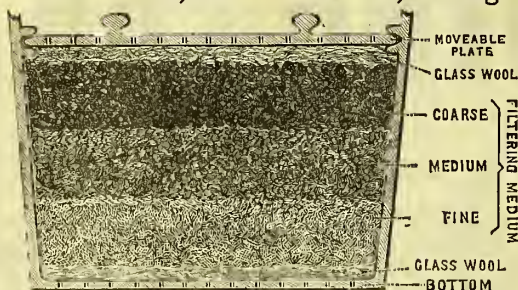
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S. MAW, SON & THOMPSON, LONDON.

MAWSON'S FILTERS.

Proven by Analysis to remove Lead, Lime in excess, Sewage and Bacteria.

SECTION
OF
FILTER BED
(EARTHENWARE).



[1]

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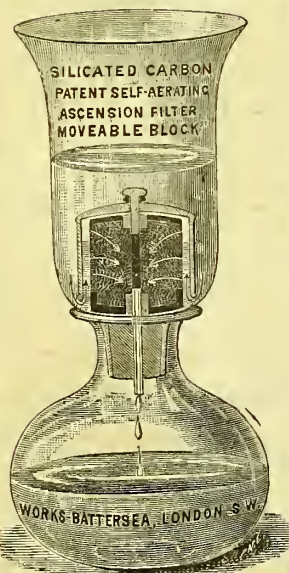
London.—Maw, Son & Thompson; Barclay & Son; Bentley & Son; Bourne, Johnson & Latimer; Lynch & Co.; Toogood & Son. Liverpool.—Symes & Co.; Evans, Sons & Co.; J. H. & S. Johnson. Manchester.—Woolley, Sons & Co. Birmingham.—Southall Bros. & Barclay. Bristol.—Ferris & Co. Edinburgh.—Duncan, Flockhart & Co.; Raimes & Co. Glasgow.—Glasgow Apothecaries Company. Belfast.—Grattan & Co. Cork.—Goulding, Bannister & Co., Limited.

COLONIAL AND FOREIGN. Bombay.—Kemp & Co., Limited. Calcutta.—Smith, Stanistreet & Co. The Cape.—B. G. Lennon & Co., Cape Town, Port Elizabeth, and East London. Natal.—E. S. T. Stantial, Pietermaritzburg. Hong-Kong, China, and Manila.—A. S. Watson & Co., Limited. New Zealand.—Kempthorne, Prosser & Co., Dunedin, Christchurch, Wellington, and Auckland. Spain.—José Bowron, Murcia. Denmark.—Leopold Gyth, Copenhagen, &c., &c.

AERATED AND FILTERED WATER.

SILICATED CARBON PATENT SELF-AERATING MOVEABLE BLOCK FILTERS.

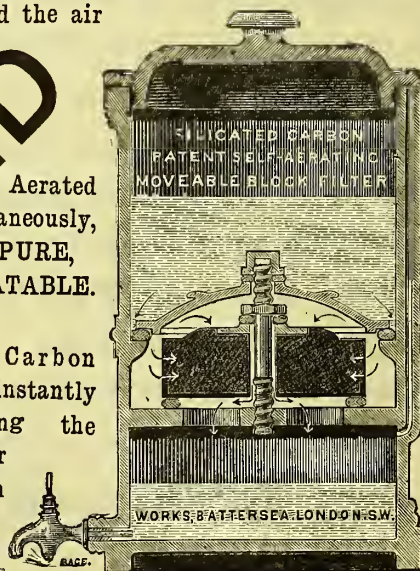
LIBERAL DISCOUNT TO THE TRADE.



Glass Table Filters.

Each time that the Filter is filled the air under the Aerator Cover is forced in the direction shown by the arrows through the Silicated Carbon Block, so that the Water is & Filtered simultaneously, rendering it BRIGHT, & AERATED PURE, PALATABLE.

The Silicated Carbon Block can be instantly removed, leaving the whole of the Filter OPEN for inspection and cleansing.



Domestic Filters.

SILICATED CARBON FILTER CO. WORKS: BATTERSEA, LONDON.

T. & H. SMITH & CO.,

EDINBURGH AND LONDON,

Are the ONLY MANUFACTURERS of the

SALTS OF MORPHIA

To whom, at the UNIVERSAL EXHIBITION, in PARIS, 1878, the
GOLD MEDAL WAS AWARDED.

NEW YORK Office—20 Cedar Street: FRAS. JAS. MACNAUGHTAN, Agent. [2]

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The only Gelatine Coated Oval Pills of ENGLISH MANUFACTURE in the Market. Special List of REDUCED PRICES on application.

POWDERED DRUGS. All ground in our own Mills, and of Guaranteed Purity.

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GELATINE COATED HORSE BALLS (PATENTED).

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WYLEYS & CO., COVENTRY.

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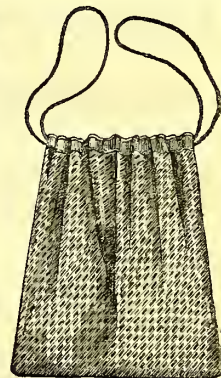
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SUPERIOR QUALITY

WATERPROOF CHECK SPONGE BAGS.

No. 1	2	3	4	5	6
7×6	8×7	9×8	10×9	11×10	12×11 inches.
6/0	7/0	9/0	11/0	12/6	16/0 per dozen.

For other descriptions see Quarterly Price Current, page 67.



S. MAW, SON & THOMPSON'S

BRIGHTON SPONGE BAGS,

WITH BALL CLASP FASTENINGS, NICKEL-PLATED.

	No.	2	3	4	5	6
		8×7	9×8	10×9	11×10	12×11 inches.
CHECK...	...	16/0	18/0	20/0	26/0	28/0 per dozen.
PAISLEY	...	18/0	20/0	22/0	28/0	32/0 "

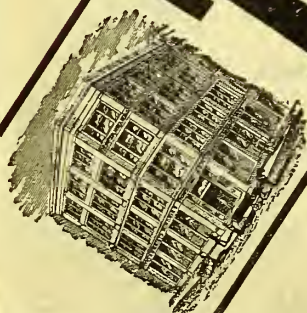


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THE BRIGHTON
SPONGE BAG.

NOW READY.**CATALOGUE**

OF

**DRUGGISTS'
SUNDRIES,****Surgical****Instruments,****CHEMISTS' SHOP
FITTINGS, &c.,****ISSUED
BY****THOMPSON, MILLARD & CO. LTD.**
LONDON,
CURTAIN ROAD,

E.C.

*Proprietors
of the***"MATER,"****"TROPICAL,"****"IMPERIAL,"****"BRISTOL,"****"STANDARD,"**

AND

"BEATRICE"**FEEDING BOTTLES**

Special attention paid to Export Orders, Commission
Indents executed, and Illustrated Price Lists posted free
to any part of the world on application.

Our goods give universal satisfaction, and buyers may with
confidence favour us with a Trial Order.

WITHOUT A RIVAL!

From the time Medicine was first discovered by the Ancients down to the present none ever made such progress as

BEECHAM'S PILLS.



They stand without a rival, and have by far the largest sale of any Patent Medicine in the World. This is a fact which every business man is bound to admit.

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The health-restoring and life-giving properties of these Pills are such as to increase their demand every year.

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Prepared only and sold by the Proprietor, **THOMAS BEECHAM**, ST. HELENS, LANCASHIRE, ENGLAND, in boxes at 1s. 1½d. and 2s. 9d. each, with full instructions for use.

EXHIBITED AT THE
AMERICAN EXHIBITION,
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OVOID CAPSULED PILLS

(Of the British Pharmacopœia and other Standard Authorities).

Originated 1870 by **McKESSON & ROBBINS**, NEW YORK, U.S.A.

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"The process of coating the McK. & R. pills with gelatine not only takes away the disagreeable appearance, odour, and taste, but forms an hermetical coating about the medicine, protecting it from atmospheric moisture, and thus preventing deterioration. This fact enables one to purchase them in large quantities without fear of change of their composition. They are not affected by climate, changes in temperature, or variations in the hygrometric conditions of the atmosphere; and drugs, which otherwise oxidise rapidly, may be preserved in this state for years. The gelatine coating is perfectly transparent and very thin, so that it requires but half a minute in the mouth to dissolve it. Being of ovoid shape, they do not resemble ordinary coated pills; they are swallowed with the greatest ease where the above mentioned are rejected. The slippery character which the coating assumes after having been taken into the mouth renders the pill almost imperceptible to the sensitive mucous membranes of the soft palate and fauces, and this we think contributes greatly to the ease of administration."—Portion of article on "The Secret of Homœopathic Success," reprinted from the *Obstetric Gazette*, U.S.A.

MUSEUM, BRITISH MEDICAL ASSOCIATION, Brighton Meeting, 1886.

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COVENT GARDEN MARKET, LONDON,

WHOLESALE IMPORTERS AND EXPORTERS OF ALL KINDS OF

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HERBS, ROOTS, BARKS, & SEEDS FOR MEDICINAL PURPOSES,

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DISTILLERS OF PERFUMED AND MEDICINAL WATERS.

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ICEBERG BRAND, in Bottles, 1/, 2/, 3/6, and 6/6.

JENSEN'S COD LIVER OIL.

Bulk Oil in Barrels and Winchestersters.

Made at the Company's own Factory in BRETTESENES, LOFODEN ISLANDS, NORWAY, the largest and the best equipped Factory in the World, with a turn-out of nearly one-half of the entire production. Bulk deliveries can be arranged in Bergen, Hamburg, or London.

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A sample of SHIRLEY'S A1 BRAND MENTHOL in Boxwood Cases, with directions printed on the boxes, instead of labels as formerly, you will never buy anything else, as the article looks worth twice the value, and your trade will be doubled by selling it. Order a sample dozen and judge for yourself. The most saleable shapes are 6d. No. 11A, and 1s. No. 14A, price 3s. 6d. and 6s. 3d. per dozen respectively; or, if a large buyer, write for a sample, and it shall be sent free, with full particulars as to prices for a quantity. Buyer's own name can be printed on the cases free of charge if a moderately large order is given.



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For British Exhibitors was awarded to

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10 & 11 NORTH CHURCH SIDE, HULL.

Importer of Norwegian, Newfoundland, & other varieties.

Low Quotations on application. Delivered at London or Liverpool.

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DR. LALOR'S PHOSPHODYNE

For TWENTY-FIVE YEARS has maintained its world-wide reputation as THE ONLY SAFE RELIABLE PHOSPHORIC REMEDY ever discovered for the Permanent Cure of Brain Wreckage, Paralysis, Sleeplessness, Harassing Dreams, Premature Decay of Vital Power, and all Functional and Diseased Conditions of the System dependent upon the Deficiency of the Vital Forces. It

Cures Dyspepsia, Nerves and Heart Disease. Cures Kidney and Liver Complaints. Cures all Blood Disorders. Cures Consumption and General Debility. Checks all Wasting of the Vital Forces, from whatever cause arising.

THE EFFECT of this Standard Phosphoric Remedy in Nervous Debility and its Kindred Evils is Immediate and Permanent, all the Miserable Feelings and Distressing Symptoms disappearing with a rapidity that is REALLY MARVELLOUS.

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Actually creates new Nervous Fluid and Brain Matter, by supplying the Blood with its Electric Life Element—PHOSPHORUS, the very core and centre of the Brain itself—Restoring the fullest and most Vigorous conditions of Robust Health of Body and Mind. Full Printed Directions for the guidance of Patients in the Self-Treatment of the above Diseases are enclosed with each Bottle.

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Is the only Medicine of the kind or name awarded a Certificate of Merit at the Calcutta Exhibition, 1883-4, where all Countries were Exhibitors, and the only Trade Mark—"PHOSPHODYNE"—Registered and Protected under the Trade Marks Act. THOUSANDS of innumerable Testimonials from all parts of the World, and from the highest Medical Authorities, prove conclusively the Verdict Universal that in the World of scientific research no other Phosphoric Preparation has received such exalted praise and distinguished recognition. Sold in bottles at 4s. 6d. and 11s. by all Chemists throughout the World.

MANUFACTURED ONLY AT

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THE
ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,
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SOLE AGENTS FOR DR. WARLDMONT'S GALT VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Three Tubes, two-thirds full, 5s.; Tubes one-third full and Lancet-charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen Charged Small Points, 5s. Tubes two-thirds full (same as those mentioned above, but without source), in quantities for export, 25 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccinations daily, between the hours of 12 and 2, by the Consulting Physician, at the uniform fee of a guinea. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to

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The Mormon Elder's DAMIANA WAFERS.

The most Powerful
INVIGORANT
Ever Produced.

Permanently Restores those
Weakened by Early Indiscretions.
Imparts Youthful Vigor. Re-
stores Vitality. Strengthens and
Invigoretes the BRAIN & NERVES.
A Positive cure for IMPOTENCY
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and Sure. 4s. per box, 6 for 20s.
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PERFECT IN PURITY AND UNIFORM IN STRENGTH.

The most efficacious antacid and mild
aperient for Delicate Constitutions,
Ladies, Children, and Infants.

OF ALL WHOLESALE DRUGGISTS

METHYLENE.

Obtained by the action of Metallic Zinc on Chloroform and Alcohol.

Discovered to be a general Anæsthetic by Dr. RICHARDSON in 1867.

1-lb. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

COMPOUND ANÆSTHETIC ETHER,

For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

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PEROXIDE OF HYDROGEN.

First introduced as a medicine by Dr. RICHARDS

ETHYLATE OF SODIUM

(Dr. RICHARDSON'S Formula), for removing Nævi, &c. In 3-oz. & 1-oz. Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. &

STYPTIC COLLOID,

or promoting the Healing of Wounds by the first Intention.

In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.

CHARCOAL CAPSULES,

Containing Pure Vegetable Ivory Charcoal.

In Boxes, 2s. 6d. each.

ADVANCE WITH THE TIMES!

Every Chemist should put up SYR. HYPOPHOSPH. CO., and push it as the most modern form of "Chemical Food" and "Quinine Tonic."

YEATMAN'S

SYR. HYPOPHOSPH. COMP.

Is the STRONGEST and MOST ELEGANT Syrup yet offered.

ONLY CHEMISTS ARE SUPPLIED.

It contains in each fluid drachm—

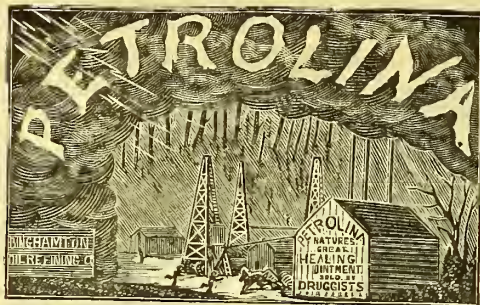
Hypophosphite of Lime	1 gr.
" " Soda	2 grs.
" " Potassa	1 gr.
" " Iron (Protoxide).....	1 gr.
" " Manganese.....	1/4 gr.
" " Quinine	1/4 gr.
" " Strychnine	1/100 gr.

SLIGHTLY ALKALINE.

The composition may be varied to suit buyers. Diluted with an equal bulk of Syrup it possesses the average strength of the advertised Syrups. As HYPOPHOSPHITE, and NOT Pyrophosphate of Iron, is used in this preparation, no inelegant precipitate occurs.

PRICES ON APPLICATION.

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Packed in oak kegs, 112 lbs., 56 lbs., and 28 lbs., and also in the Patent "Self Opening" tins of 14 lbs., 5 lbs., and 1 lb. The acme of convenience.

Do not be satisfied with an inferior Petroleum Jelly when the
**VERY BEST IN THE MARKET IS THE LOWEST
IN PRICE.**

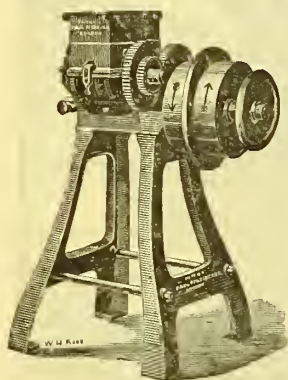
PETROLINA

Is a Pure, Sweet, Non-oxidisable Paraffinum Molle, superior in quality to anything of the sort ever produced.

Prepared in two consistencies, No. 1, 115° to 120° M.P.;
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To be had of all Wholesalers throughout Great Britain.

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CHEMISTS' MACHINERY.

PILL MASS KNEADING MACHINES.

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FULL PARTICULARS OF ABOVE ON APPLICATION TO

WERNER & PFLEIDERER, 86 Upper Ground St.,
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COCKING & CO., YOKOHAMA, DISTILLERS OF

JAPAN OIL of PEPPERMINT AND MENTHOL CRYSTALS,

Beg to draw the attention of the Trade to their extra steam refined, twice rectified, water white PEPPERMINT OIL, retaining its full aroma, pungency, and strength: it is considerably cheaper than H. G. and other American Oils, and consumers will do well to give it a trial. Our Oil is specially rectified by means of apparatus constructed according to our own invention, by which all those polymeric products of a tarry nature are extracted, the presence of which causes the Oil to have the rather characteristic flavour (pertaining to all other Japan Oil) objected to by most consumers. It is perfectly soluble in spirits of wine, and makes a beautifully bright Essence of Peppermint.

See that each Bottle is in its Original Wrapper, and has our Trade Mark strap across the mouth of the Bottle.

Can be obtained from all the leading Wholesale Druggists, amongst whom we may mention the following:—

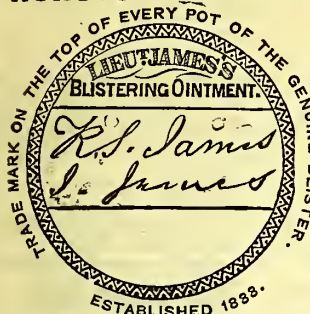
BAISS BROTHERS & CO., London.
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ESTABLISHED 1833. HORSES.—LIEUT. JAMES'S BLISTER.



CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, are now and have been Agents 54 years.

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W. H. JAMES, Sole Manufacturer, STANFORD, FARRINGDON, BERKS. Advertis'd in "Bell's Life" 54 years. Beware of Spurious imitations.

INDEX TO ADVERTISEMENTS,

See pages 15, 16, 17.

HORSES.—LIEUT. JAMES'S BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).



THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—
 1 oz. pots from 14/- per doz. to 12/6 per doz. | 1 lb. pots from £4 4 0 per doz. to £4 0 0
 2 " " £1 5 6 " " £1 8 0 " | 1 " " 7 16 0 " 7 10 0
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Observe the Trade Mark.—"A Horse's Head on the top of each Pot, and the signature, R. J. James."

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JAMES v. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.

MESSRS. J. ATKINSON & CO.,

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Beg to inform the Trade that they are in no way connected with the firm of Messrs. J. & E. Atkinson, of Old Bond Street, but sell their Goods upon their own merits, viz.:—QUALITY AND CHEAPNESS.

This Unique Preparation has the extraordinary property of keeping the

HAIR IN CURL.

Now used by Ladies in all parts of the World,

Needs but an introduction to command a ready and constant sale.

FRIZZETTA
(REGISTERED.)
Handsome Show-cards, Glass Tablets, and Circulars profusely supplied.
Foreign and Colonial Chemists should write for Terms, &c.

F. W. BATES, CHEMIST,

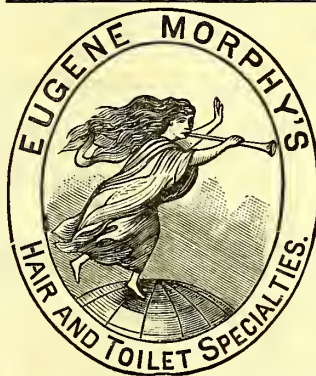
BROOKS'S BAR, MANCHESTER.

AYER'S RECAMIER PREPARATIONS FOR THE COMPLEXION.

Positively made from a formula used for forty years by Madame Recamier, the noted beauty of her day, and never before manufactured for sale. Used daily, to the exclusion of all other articles of a like nature, by Mesdames Adelina Patti, Sarah Bernhardt, Lillie Langtry, Mrs. James Brown-Potter, and hundreds of others. For terms to the trade, and for sale at retail, apply to

The AMERICAN EXHIBITION, LONDON, Column B, No. 34.

RECAMIER CREAM—A Curative. RECAMIER BALM—A Beautifier. RECAMIER POWDER—For Ladies and Infants, and Gentlemen after Shaving. Home Office—39 & 41 Park Place, New York City, U.S.A.



WALNUT POMADE.

A Triumph as a Hair Restorer. An immediate effect.

Pleasant and Harmless.

Four Colours—Golden, Light Brown, Dark Brown, and Black.

Pots— $\frac{1}{2}$ oz. (1/6) 12/ per doz.
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DEPILATORY POWDER FOR REMOVING

SUPERFLUOUS HAIR

Speedily and effectually, without injuring the Skin.

Retail, 1/; Wholesale, 8/ per doz.

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WARREN'S REFINED WOOL FAT,

An excellent Remedy for Skin Diseases, 1/9 per lb., in 4-lb., 7-lb., and 14-lb. tins, tins free,

OFFERED BY

A. & J. WARREN,

Wholesale Druggists, 23 & 24 Redcliff Street, BRISTOL.

Licensed Makers of Methylated Spirit and Finish.

PROPRIETORS OF STODDART'S SEA SALTS.

Established nearly 40 years. Advertised continually.

1 $\frac{1}{2}$ d. Packets (in dozen boxes), 12/ per gross.

6d. or 2-lb. Boxes .. 4/ per dozen | 4/- or 28-lb. Bags 36/ per dozen.

1/2 or 7-lb. " .. 9/6 " | 8/- or 56-lb. " .. 72/ "

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Right of manufacture, good will, &c., purchased March 15, 1886.

TERMS—Monthly Account, less 10 per cent. A reduction on 5-cwt. and 10-cwt. lots. Obtainable from Wholesale Patent Medicine Houses.

Carriage paid on orders for the above article amounting to £2 and upwards.

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BATTLE'S VERMIN KILLER. { Mice eat it readily and Die on the spot.



Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

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From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1887.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

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No Chemist or Storekeeper should be without a supply.

SUDDEN DEATH

Is sure to happen to any Rats, Mice, or Vermin that touch

"RAT CATCHER'S" POISON.

Best in the market. Nothing like it. Keep "Toby" and "Pussy" out of the way and try it. Packets at 1s., 6d., & 3d. Pay you well. Sell at sight. Very liberal terms. Order of Wholesale Agents.

WALKER, TROKE & CO., CITY ROAD, LONDON

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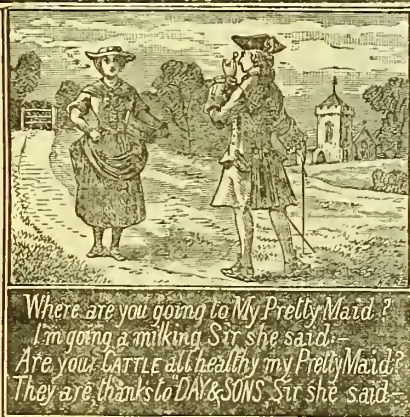
FOUND DEAD

BY SANFORD'S RAT POISON.

"I have found 145 rats killed in my farm buildings by it."—C. Wilson Offord.
"It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 200 rats from one dressing with it."—C. Cook, Grange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.

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The True Origin of the Old Rhyme.



Where are you going to My Pretty Maid?
I'm going a milking Sir she said—
Are your CATTLE all healthy my Pretty Maid?
They are thanks to DAY & SONS Sir she said.

Awarded 28 Prize Medals.

USED EVERYWHERE FOR NEARLY 50 YEARS.

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DAY & SONS' "PURIFIED DRIFFIELD OILS" (commonly called by Farmers "Days' Black Oils") for Wounds and Injuries of all kinds in all animals; anointing in difficult Lambing and Calving, &c. Price 2/6 per bottle.
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DAY & SONS' "ALTERATIVE POWDERS," for Horses. Price 3/6 per Canister containing one dozen.

INVENTORS AND SOLE PROPRIETORS OF THE "ORIGINAL" **UNIVERSAL MEDICINE CHEST**, PRICE £2 4s., carriage paid, which contains above five, together with four other, matchless medicines, and easy guide, "Everyday Farriery."

Beware of Imitations and note our ONLY Address—
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BEST & SAFEST DENTIFRICE.



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NOTICE.—We have had so many enquiries for O.S. Tooth Blocks loose without boxes, that we have put them on the market in packets of one dozen, and they are designated No. 0 (please note this when ordering).

Our O.S. Tooth Blocks, in patent metallic boxes, designated No. 1, are now supplied with sunk recess, into which Chemists can affix their own labels. Appropriate labels in dark leatherette, with Chemist's name, &c., in gilt lettering, can be supplied sufficient for 1 gross at 5s. (actual cost to us).

Chemists' names can be stamped on each Block free of charge on any quantity, the only expense being first cost of dies, at 6d. per letter ordered.

A sample, post free, for two stamps.

The Original
Arnicated
Please see that
YOUNG'S
goods are
supplied, as there
are many worthless
imitations.

Corn and
Bunion
Plasters.

ESTABLISHED

A.D.

1848.

HENRY YOUNG, Manufacturer, LONDON.

CHUBB'S Best SEIDLITZ POWDERS

—Full Weight—Loose, at 7s. per gross; in lift-off boxes, 7s. 6d., and in hinged boxes, 8s. 6d., per dozen.

CHUBB'S Extra Scented VIOLET POWDER

(WARRANTED PURE STARCH POWDER),

In 1d. Boxes, 6s. gross, and 2d. Boxes, 11s. gross, and in 1/4-lb. and 1/2-lb. Packets, 10d. per lb.

CHUBB'S Prepared FULLER'S EARTH

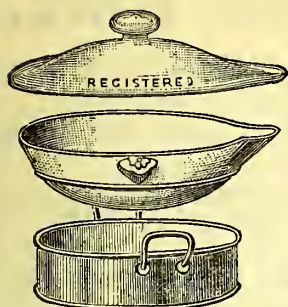
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SUBJECT TO 15 PER CENT. DISCOUNT FOR CASH.

May be obtained through all the Wholesale Houses, or direct from
CHUBB & CO., 29 OLD ST., LONDON, E.C.
SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

"MAY-ROBERTS" WATER BATH,

REGISTERED.



This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover.

1 PINT.	5 PINT.	10 PINT.
Each 3/0 5/6 9/6		

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Telegraphic Address—"FEEDING BOTTLES LONDON."



BY SPECIAL
APPOINTMENT.

SPRATTS PATENT MEAT "FIBRINE" VEGETABLE DOG CAKES (WITH BEETROOT).



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DOG MEDICINES for the Cure of Distemper, Worms, Mange, Eczema, Ear Canker, Rheumatism, and the various other Canine Diseases. Full List and Pamphlet on Canine Diseases, post free.

"COMMON SENSE OF DOG DOCTORING," price 6d. **DOG SOAP.**

LOCURIUM. Price 6d. and 2s. per Bottle, retail. A Patent Vegetable Oil, curing Sore Feet in Dogs, Cracked Heels, Broken Knees, or Sore Backs in Horses; and Sores, Bites, and Wounds of all kinds either in man or beast. Small Pamphlets on Canine Diseases supplied free for distribution.

WHOLESALE TERMS OF **SPRATTS PATENT LIMITED, LONDON, S.E.,** OR YOUR WHOLESALE HOUSE.

HORSE, CATTLE, AND SHEEP MEDICINES.

BY ROYAL APPOINTMENT.



By Special Warrant,
Dated 27th December, 1865.

DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE



By Special Warrant,
Dated 10th February, 1866.

"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS.

Containing the following Matchless Remedies for all Disorders in Horses, Cattle, Calves, Sheep, & Lambs:

THE CHEMICAL EXTRACT.

For assuaging pain and inflammation in all wounds, saddle galls, strains, bruises, and swellings in horses; for paining after calving and lambing, and for swollen udders and sore feet. 1/2-dozen box, 7s. 6d.

THE RED DRENCH.

Celebrated for inflammatory disorders; such as fevers, pleurisy, foot-and-mouth complaint, yellows, surfeit, and red water. Also for difficult calving and lambing. 3s. 6d. and 13s. per dozen box.

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Unmatched for colic or gripes and debility in horses, for colds, chills, shivering fits, and diarrhoea in cattle, calves, and sheep. 20s. per dozen box.

THE CARMINATIVE CHALK.

A warm stomachic in severe diarrhoea or flux, by way of change of the gaseous fluid in great irritation of the bowels. 1/2-dozen box, 10s.

Price of Chests, with "Guide to Farriery"—No. 1, £6/6/0; No. 2, £2/16/6; No. 4, £2/17/6 (for horses only). Carriage paid.

Prepared only by **DAY, SON & HEWITT, 22 DORSET STREET, LONDON, W.,** And sold by all Wholesale Houses in London; Hood & Co., Melbourne; Felton, Grimwade & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Sharland & Co., Druggists, Auckland; Fairthorne & Co., Llanneaston; Dombrain & Co., Christchurch; Jenoure & Co., Jamaica.

A LIBERAL DISCOUNT TO EXPORTERS, AND ALL PARTICULARS ON APPLICATION.

THE RED PASTE BALLS AND RED POWDERS.

Invaluable for ill-conditioned horses and after hard hunting and driving. For coughs, colds, staring coat, itching, swollen legs, and want of strength. The Powder is to be given in the feed. 7s. 6d. per dozen.

THE BLACK PHYSIC BALLS.

Excellent for confined bowels and for worms in horses, but a bran mash should be first given. In bad cases of worms give a dose of Broncholine after the Ball. For cows and oxen, for stoppage of the bowels, give a dissolved Ball 8s. per dozen.

THE BRONCHOLINE:

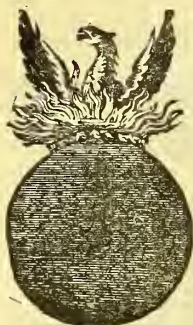
Invaluable for husk, hoarse, or cough in cattle, calves, and sheep; for tapeworms, and worms in horses. 1/2-dozen box, 7s. 6d.

THE GASEODYNE:

Used as laudanum in uncontrollable spasmodic pains in ewes lambing and perfectly safe. 1/2-dozen box, 10s. 6d.

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Used as sweet spirits of nitre in severe colds and shivering fits. 1/2-dozen box, 7s. 6d.

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BALL DENOTES
COLOUR OF PAINT.

PHENIX COLOUR WORKS, BRISTOL,
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WHITE LEAD, ZINC WHITE,

PAINTS & COLOURS OF ALL
KINDS.

MIXED PAINTS READY FOR USE,
In Tins, 1, 2, 4, 7, and 14 lbs. each.

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HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators,
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Export Orders receive special and prompt attention.

**PURE
SPIRITS OF WINE.**

60 o.p., 20/3 per gall.; 56 o.p., 19/9 per gall.

1/ per Gall. Discount for Cash with order.

Further allowance for quantity. **STEAM STILL ONLY.**

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PATENTEES & MANUFACTURERS OF ROUND CARDBOARD AND OTHER BOXES,
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For POSTAL and general purposes; also PATENT BARREL PACKAGES with Metal ends for dry goods.
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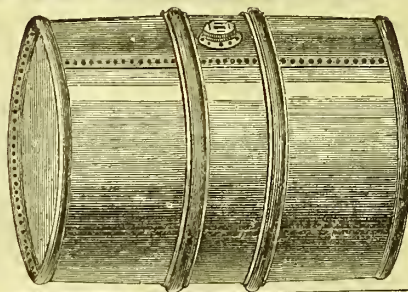
MANUFACTURERS OF
METALLIC CASKS, DRUMS, & KEGS,
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PATENT SELF-FIXING TINS.

IRON BARRELS,
CAPACITY 40 TO 120 GALLONS
AS PER ILLUSTRATION.

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They are specially adapted for all kinds of Chemical Products, Sulphuric Acid, Glycerine, Spirits, Oils, Turpentine, Petroleum, Benzoline, Varnishes, Tar, Naphtha, Mineral Extracts, and Inflammable Liquids of every description.

We are making them in three qualities, "Black Iron," "Lead Coated," and "Tinned."

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MANUFACTURERS OF

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OAKLEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakley's Patent India-Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Canisters with perforated Tops to prevent waste, at 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

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For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKLEY'S "POLYBRILLIANT" (Registered).

A Magic Pomade for Cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Pastes. Tins 1d., 2d., 3d., and 6d. each.

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In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

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Show Room: 31 ELY PLACE, E.C.



QUEEN'S BURMESE WARE is of the nature of glass, its discovery (for that it was rather than invention) is due to the United States; the ware is now manufactured in England under a patent. Its loveliness when illuminated is due to the material, its translucency, and its blending from peach to yellow, which is of the perfectness that radiated heat alone can effect.



"FAIRY" LAMPS AND "FAIRY" LIGHTS.

The patentee of the "FAIRY" Lights considering the Burmese Ware very suitable for his "FAIRY" Lamps, has had made of that Ware some very beautifully designed Chandeliers, Candelabra, Brackets, Bowls, &c., which he is pleased to add to his already large and varied stock of "FAIRY" Lamps.

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This "FAIRY" system of Illumination has called forth numerous encomiums from both individuals and the Press, but no greater compliment could possibly be paid than that of the Royal Botanic Society of London on June 30th and July 10th, 1886, when not only did the Council graciously award a "Special First Class **GOLD MEDAL**," but a resolution conveying a vote of thanks "to Mr. Clarke for his great assistance at the Evening Fêtes of June 30th and July 7th, 1886," &c. Then again in *Punch*, July 17th, 1886, there appeared—"Royal Botanical Fête! **Illuminations perfect. Great Success. All sweetness and light.**" Complimentary articles appeared in *Truth*, February 25th and March 4th, 1886; *The World*, April 21st, 1886; *The Pottery Gazette*, August 2nd, 1886; and various other Journals of high-class standing.

N.B.—All the Lamps bear the Trade Mark "**FAIRY**," without which none are **genuine**.

Patented, and Trade Mark "FAIRY" Registered in Great Britain, France, Germany, Belgium, Spain, Austria, Russia, United States of America, and all the Australian Colonies.

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PUREST. STRONGEST. BRIGHTEST. BEST.

Own Manufacture. Guaranteed Absolutely Pure, free from objectionable tastes or smells, aniline, alkali, or acid, and not to turn rancid or colour the Butter Milk. In extra large sized and attractive Bottles, to retail at 6d., 1s., 2s. 6d., and 4s. 6d. each, on usual terms.

IN BULK.—We quote SPECIAL PRICES if required in this way; and, being our own Printers, are prepared to supply Customers with special labels and directions for use at **COST PRICE**, and also supply small quantities of suitable bottles to fit orders at low prices, thus removing the trouble of first introducing the article. Samples and labels on application.

It is, we believe, superior to the imported or any other Colourings. Gives a splendid Golden Colour to Pomades, Ointments, &c. Send for Samples and Prices before ordering elsewhere.

READ THE FOLLOWING:—For Unrivalled Testimony, see page 42, "CHEMIST AND DRUGGIST," 15th January, 1886.

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Proprietors of Tomlinson & Co.'s "BUTTER POWDER," for removing all bad tastes from Butter;
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"Anti-Corrosive Boiler Composition," "Mercurial Sheep Ointments," &c.

GIBSON'S DELECTABLE JUJUBES, VOICE JUJUBES, & GLYCERINE PASTILLES,

Put up in 4-lb. Decorated Tins with Glass Lids, Tins free, are now being inquired for by buyers from all parts of the world.
They are not surpassed in quality by any maker, and give entire satisfaction.

MEDICATED AND HIGH-CLASS LOZENGES, OF EVERY KIND, sent out in 2-lb. or 4-lb. Bottles, Bottles Free; or in Tins, from 10-lb. upwards.
Lime Juice Tablets, Malt Tablets, Acid Drops, and Best Quality Boiled Sugars of every kind
CHLORODYNE JUJUBES AND CHLORODYNE LOZENGES.

PENNY SUGAR WORM CAKES, suitable for either children or adults. Have an immense sale, keep in any climate, and please everybody. Manufactured by
ROBERT GIBSON, Carlton Works, Hulme, MANCHESTER, & 1 Australian Avenue, LONDON.
Price Lists sent on application. Our Goods can be bought through any Wholesale or Export House in London.

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THE OLDEST AND MOST SUCCESSFUL.

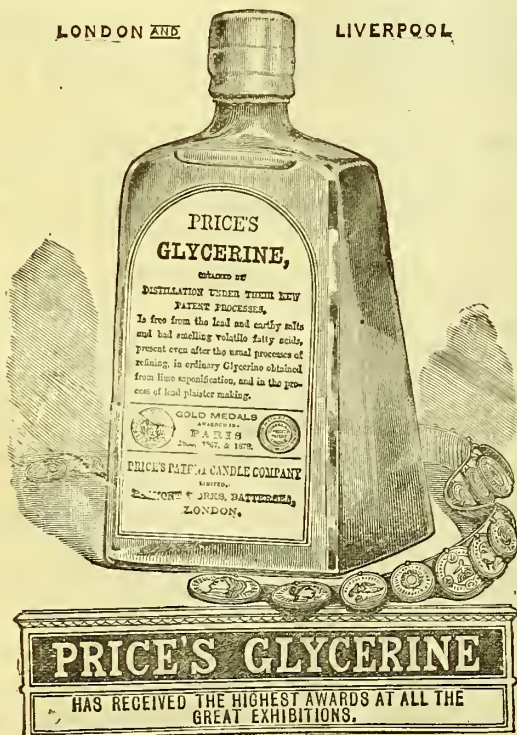
doz. mounted on a handsome Illustrated Show Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case, with full directions for use.
N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue. Wholesale by all the Patent Medicine Houses, or from

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SAVARS

COCA WINE.

Introduced to the Trade in 1875.

This Wine is made from selected Green Leaves, and contains all the active ingredients of the plant. The Cocaine and the Ozonine being both held in solution.

In 6/0 Bottles (2,000 Leaves) 57/ dozen.
In 3/6 " (1,000 ") 33/ "

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Makes Starched Linen like new. Does not stick to spicer-like Materials. Once tried always wanted. Used in the Royal Laundries. Sold everywhere, in Packets, 1d., 3d., 6d., and 1s. each. Write for quotations.

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To all those of either sex who have lost or are losing their Hair,

CRAPPER'S CRINIDONE,THE HAIR
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THE BEST AND MOST RELIABLE, AND THEREFORE THE CHEAPEST
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NO MUSTY FLAVOUR. REQUIRES NO SUGAR.

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Is the best, cheapest, and most effective Powder for cleaning and polishing Metals
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Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

A daily luxury for rich and poor.

VAN HOUTEN'S COCOA

Guaranteed Pure and Soluble,

Is **SIMPLY UNEQUALLED**, and really **THE CHEAPEST**
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A cup of this cocoa costs no more than a cup of tea, and is a **highly nutritive** beverage.

Digested with marvellous facility by the most delicate invalids and children.

Made instantly with boiling water.

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"Van Houten's Cocoa" is admirable. In flavour it is perfect, and it is so pure, well prepared, and rich in alkaloid, that it
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The **Lancet** remarks: "... It goes a long way, and is really cheaper to use in the end, etc., etc."

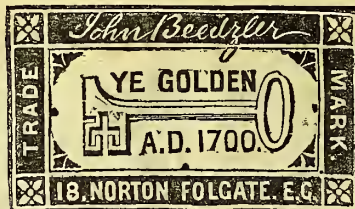
Invaluable in railway stations, hospitals, on board ship, in the camp, for workmen (at home and to take to their work), etc., etc.

Try it once and you will use and recommend it always.

Sample tins free through your Grocer or Chemist.

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"BLOOD PURIFIER."**"BLOOD CLEANSER."**

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Which is warranted to cure

Ulcerated Sore Legs,
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Scorbutic Disorders,
Abscesses and Boils,
Glandular Swellings,
Scarlatina and Measles,
And all Skin Eruptions in
Children, from whatever
cause.

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and all Blotches and Skin
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whatever cause.

BEEDZLER'S ALTERATIVE BLOOD MIXTURE cures the above complaints, speedily and effectually destroys all malarial poisons in the blood, acting upon the liver, regulating the gastric juices of the stomach, promotes the digestion, makes new blood, gives health, strength and vitality to the system generally —a trial will convince the most sceptical of its wonderful properties.

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SPECIAL AND IMPORTANT CAUTION !!!

On account of the increasing sale of, and great demand for

BEEDZLER'S ALTERATIVE BLOOD MIXTURE,

The Proprietors consider it necessary to caution the Public against any imitations which may be offered for sale. When you ask for BEEDZLER'S ALTERATIVE BLOOD MIXTURE, see that you obtain it, and do not be put off with any spurious and worthless imitations.

The following will be a sufficient guarantee to the purchaser of its genuineness :—

Each Bottle bears the Government Stamp.

It is put up in 13½d., 2/9, 4/6 and 11/- Bottles.

The Name and Trade Mark on every Bottle.

Solely Manufactured by the Proprietors, at

18, NORTON FOLGATE, E.C.,

11 & 12, BISHOPSGATE LOW LEVEL, & 193, HIGH STREET, BORO', S.E.

In Bottles only at 1s. 1½d., 2s. 9d., 4s. 6d. and 11s., FREE BY POST.

Central Wholesale Depôt, Edwards & Sons, 157, Queen Victoria Street, E.C., and all Patent Medicine Houses. May be ordered through all Chemists throughout the United Kingdom.

**THE GREATEST SALE OF ANY MEDICINE IN THE WORLD, WITH NEARLY
ONE HUNDRED YEARS' REPUTATION.**



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We offer

"SYMES' THIBET MUSK,"

Specially Grained, of Splendid quality, in sealed Bottles of $\frac{1}{4}$ oz., with Messrs. Symes & Co.'s guarantee on each, at following prices for cash:—

1 × $\frac{1}{4}$ -oz. Bottle	25/-	} Net.
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16 × $\frac{1}{4}$ -oz. „ (4 oz.) ...	80/- per oz.	

A fresh Shipment just to hand. Orders will be despatched as received, priority being given to earliest purchasers.

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THE NATURAL KARLSBAD SPRUDEL-SALT contains all the essential principles of the KARLSBAD "SPRUDEL" MINERAL WATER, from which it is obtained by simple evaporation. It is alkaline, and dissolves readily. As a remedial agent, taken in small doses it acts as a *diuretic*, but in large doses as an *aperient*. It may be taken in doses of from 5 to 10 grammes—i.e. 77 to 154 grains, from 1 to 2 teaspoonfuls—dissolved in water, preferably soft. If the water is hard, it may become slightly turbid with the Salt in solution, but that is not in any way objectionable or prejudicial, as it does not at all affect the remedial action of the Salt. Or it may be taken, in the same doses, as an addition to the ordinary draughts of the Karlsbad Mineral Water, increasing its effect.

The SPRUDEL-SALT is officially prepared solely by the Karlsbad Municipal Authority, at their SPRUDEL-SALT WORKS. It is sold only in glass bottles, of two sizes, containing respectively 100 and 200 grammes; every bottle bearing labels with the Trade Mark as well as the Signature of LOBEL SCHOTTLANDER, KARLSBAD (Austria), without which, and unless so packed, NONE ARE GENUINE. It is prepared and sold in two forms, crystallised and as powder.

PRESERVATION OF THE SALT.—The bottles must be kept well corked to prevent the Salt from disintegration, and as the Crystallised Salt commences to deliquesce at a temperature of about 88° Fahr., care must be taken to keep it in a dry cool place.

THE SPRUDEL-SALT IN POWDER (formerly labelled *Quellsalz*) is recommended as preferable for Exportation to and use in all tropical countries, because it does not deliquesce, and therefore undergoes no change. It is taken in the same doses, and has the same effect as the Crystallised Sprudel-salt.

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52 FARRINGDON STREET, E.C. (and at LIVERPOOL and BRISTOL),

SOLE CONSIGNEES FOR GREAT BRITAIN & THE COLONIES.

TRADE PRICES:—Bottles containing 200 grammes = 3,086 grains 43/ per dozen.

Half-Bottles .. 100 .. = 1,543 21/ ..

CARRIAGE PAID. 5% Discount for Cash, or Quarterly Account Let.

CADBURY'S COCOA ESSENCE

The medical profession order Cadbury's Cocoa Essence in thousands of cases, as the most wholesome beverage. Be sure

you get it when asked for, as imitations are often pushed for the sake of extra profit.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

DO NOT LET YOUR CHILD DIE!

Fennings' Children's Powders Prevent Convulsions; are Cooling and Soothing.

FENNINGS' CHILDREN'S POWDERS,

For Children Cutting their Teeth, to Prevent Convulsions.

Sold in Stamped Boxes, at 1s. 1½d. and 2s. 9d. (great saving), with full Directions.

Do not contain Calomel, Opium, Morphia, nor anything injurious to a tender babe.

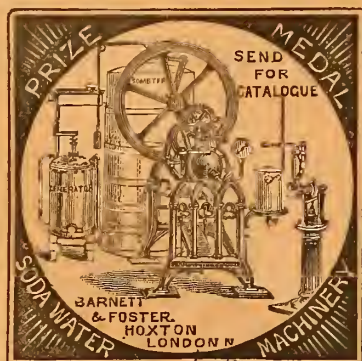
Chemists, by applying to the Patent Medicine Houses and Wholesale Chemists, can obtain, free of any charge, a supply of "FENNINGS' EVERY MOTHER'S BOOK," for Counter distribution.

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TEETHING.

SAFE
TEETHING

SODA WATER MACHINERY

And all Appliances for the Manufacture of all Aerated Drinks in the highest state of perfection.



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EXHIBITION, LONDON, 1884.

Our Machines are universally adopted throughout the world for the manufacture of all kinds of Aerated Drinks, whether in bottles, siphons, or counter fountains. There are in England alone over 2,000 factories where our Machinery is in use, besides many thousands in India and the Colonies. They are the simplest, safest, and cheapest for the purpose, and produce a highly-charged gaseous water free from metallic or foreign contamination. All our Machines have a Gasometer, and it forms a most important necessity where purity of product is required, as in this the gas is expanded and purified; it also removes the possibility of accidents by explosion, and avoids the necessity of complication—these we consider of greater importance than the saving of a few inches of floor space.

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THE CHEMIST AND DRUGGIST.
EXTRA SUPPLEMENT
BUSINESSES WANTED. PARTNERSHIPS.
BUSINESSES FOR SALE. SITUATIONS WANTED.
PREMISES TO LET. AUCTION SALES. SITUATIONS VACANT.
EXCHANGE COLUMN

Advertisements for this Supplement must be prepaid, and can be received at the Office, 42 Cannon Street, until 5 p.m. on Thursday afternoon, or by first post on Friday morning of each week.

SATURDAY, JUNE 11, 1887.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.,

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The Business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

Particulars of any of the following will be sent free on application:—

1.—**£850.—A METROPOLITAN BUSINESS.**—Dispensing and Prescribing Business; all ready money; returns **£850**; profits large; well fitted shop and good stock; entrance **£700**; very busy locality.

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3.—**£700.—AN ESTABLISHED METROPOLITAN BUSINESS.**—In a busy locality; managed by an assistant; handsomely fitted shop and good stock; returns nearly **£700** yearly; price about **£600** or offer.

4.—**£600.—A SUBURBAN BUSINESS.**—In a particularly eligible position; returns nearly **£600**, with large profits; good residence; very pleasantly situated; entrance about **£500**.

5.—**£500.—A SUBURBAN BUSINESS.**—Old-established; in good locality; returns about **£500**; Retail and Dispensing of good class; profits above the average; well-fitted shop and convenient house; price about **£500**.

6.—**£1,000.—A SUBURBAN BUSINESS.**—Death vacancy; good class, well-established concern; returns about **£1,000** at present, have been much larger; good house; situate in main position; any reasonable offer will be accepted.

7.—**£550.—A METROPOLITAN BUSINESS.**—Retail and Dispensing; large handsome shop and double-fronted; returns (under management) nearly **£550**, increasing; good house; moderate rent; price about **£500**.

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9.—**£850.—A SOUND AND LONG-ESTABLISHED BUSINESS.**—In a University town; returns rapidly increasing, at present about **£850**; capital position and good house; a gentleman with a knowledge of Homeopathic business would find this a specially good investment; about **£700** required.

10.—**£1,200.—NORFOLK.**—An old-established business of good class; returns **£1,200**; very profitable; good house, &c.; about **£100** required; goodwill and valuation of stock and fixtures.

11.—**£1,000.—EASTERN COUNTIES.**—Large market town; very old-established. Mixed Business for immediate transfer; returns about **£1,000** yearly; capable of great extension; good house; rent **£60**; valuation of stock and fixtures only required; no premium for goodwill.

12.—**£1,500.—HANTS (Seaside).**—Good ready-money Retail and Dispensing Business; returns about **£1,500**; convenient house; rent moderate; about **£1,500** required; full particulars on application.

13.—**£1,700.—NORTH OF ENGLAND.**—Good town; Retail and Dispensing Business; held by vendor many years; returns at present at the rate of **£1,700**; net profits over **£400**; large, handsome, well-fitted shop and good stock; about **£1,500** required, part may be paid by instalments.

14.—**£500.—NEAR TOWN.**—Good-class Prescribing; held by vendor many years; returns over **£500**, with large profits; large, handsome shop and good stock; entrance **£500** or reasonable offer.

WANTED.

WANTED.—PARTNERSHIPS OR FIRST-CLASS DISPENSING BUSINESSES, EITHER IN LONDON OR GOOD PROVINCIAL TOWNS—PROFITS NOT UNDER £500 YEARLY.—CASH READY.

N.B.—NO CHARGE TO PURCHASERS. Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

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Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms, where business of a confidential nature requires the especial attention of a London agent.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, House and Shop where there is a good opening for a Chemist; or a Business where the stock could be reduced would be entertained. Particulars to J. H., 19 Market Street, Bacup, Lancs.

WANTED, in or near London, or in the South of England, a good Light, Retail, and Dispensing Business; price from **£900** to **£1,500**; no agents; cash. Address, "Assistant," 34 Meadow Street, Moss Side, Manchester.

A THOROUGHLY genuine good class Retail and Dispensing business, not too far from London, returning from **£900** to **£1,200** a year, or less if capable of rapid improvement. Full particulars to J. Davies Dormington, Lausanne Road, Hornsey, N.

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3s. 6d. for fifty words; 6d. for every 10 words beyond.

£150. London, W., suburb.—Must be sold, a Light Retail, Dispensing, and Prescribing Business; returns average over £400; handsome shop; good house; rent £60; a large trade can be done. Apply, Taylor & Co., 79 Queen Street, Cheapside, London.

WORKS.—Family retail; Agricultural and Mineral Waters in good market; town very healthy; proprietor retiring after several years' successful occupancy; returns £1,500; will be sold at valuation of stock and fixtures, about £700, part of which can remain. F. J. Brett, valuer, Leicester.

CORK.—For sale, the Goodwill and Lease of Shop and Dwelling-house; rent £80, long lease; well situated and in excellent condition; present proprietor joining a larger concern in England; part purchase money may remain out. Apply to James Selkirk, Pharmaceutical Chemist, G.B., 7 Pembroke Street, Cork.

A GENUINE Dispensing and Family Retail Business, very pleasantly situated in Canonbury, Islington; been in present proprietor's hands 10 years; returns may be easily doubled by constant personal attendance; letters useless; a personal interview required. Apply for particulars to T., care of Hearon, Squire & Co., 5 Coleman Street, City, E.C.

CARMARTHENSHIRE.—Death vacancy; old-established family retail, in good market centre; average returns £1,200; excellent position; good house; an energetic man could materially increase returns, which are of a profitable character; valuation of stock and fixtures £800. F. J. Brett, valuer, 60 St. Stephen's Road, Leicester.

LONDON SUBURB.—Old-established Family Retail Dispensing and Prescribing Business; returns last year about £800; net profits about £350; good house and low rent; price about £600. Apply W. H. Taylor & Co., Transfer Agents and Valuers, Crown Buildings, 79 Queen Street, Cheapside, London, E.C.

£250.—S.E.—Handsomely-fitted, well-stocked, double-fronted, commanding Shop; main important thoroughfare; eight rooms and garden; rent only £50; long lease, many years; this Business has returned from £400 to £500; if sold before quarter-day £250 will be taken; part can remain. "Chemicus," Messrs. Hill & Sons, 101 Southwark Street.

VALUABLE old-established Family Retail and Prescribing Business; healthy market town near Birmingham; returns juvenile management £400, year ago principal did £850; corner position, busy thoroughfare; fine double-fronted shop; capital house, warehouse, and stabling; no opposition, steady man realise fortune; price £275. St. Clair, Stevenson, Comley, Colmore Row, Birmingham.

ESTABLISHED over 50 years.—A thoroughly genuine Business, doing £7 to £8 per week with limited stock, and capable of considerable extension; situate in the best position in a Black Country town; capital shop, good house and business premises; rent £35; price £225; part may remain on security. Apply, D. P., care of Wyleys & Co., Wholesale Druggists, Coventry.

CATHEDRAL CITY (West of England).—Good-class Retail, Dispensing, Prescribing, with several valuable Proprietaries worth alone £200; returns £850; well fitted and stocked; good house, garden; price £700 or offer. **KENT** (market town).—Elegantly fitted; returns £950 by manager; full prices; same hands 16 years. Messrs. Berdoe & Co., 30 Jewry Street, Aldgate.

HANDSOMELY Fitted, well stocked, full price, no cutting, right side; under management for the last 4 years; North of London; price £400; no letters will be answered. Anyone who wishes for a living at once, with every chance of success in future years, can apply personally on Thursday next, June 16, to Mr. Harle, corner of Gerrard Street and Colebrook Row, Islington.

IMMEDIATELY.—A ready-money Retail and Prescribing Business in large and rapidly increasing neighbourhood; returns over £400, and increasing; have doubled in 2 years, and would again under efficient management; splendid opportunity for a beginner; lowest cash price £250; long lease; low rental. Apply, W. H., 67 Stratford Road, Plaistow, E.

THE British and Colonial Agency (Limited), have a large number of established Chemists' Businesses on their books for disposal; genuine businesses are also wanted; Assistants and Locum Tenens supplied.—1115 Glasgow; Established Business; returns about £800.—1113. Wholesale Druggist's Partnership; London; £500 required, half share.—1111. Retail Business; Kent; price £100.—1103. Partnership; Wales; half share, £650.—1102. Retail; Notts; price £220; and many others. 27 Margaret Street, Cavendish Square, London, W. Prospectus on application.

TENDERS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

BY TENDER.—Mr. G. B. Crocker, 15 Walbrook, E.C., is instructed to offer by Tender the Goodwill, Stock, Trade Fixtures, &c., of the Chemist's Business (as a going concern) situated at 4 Dawson Terrace, Haverstock Hill, N.W., situate in a prominent position in the main road, and surrounded by a large, populous, and rapidly increasing neighbourhood, thus offering a rare opportunity seldom met with of securing an elegantly fitted Pharmacy, which must command a first-class trade; the fittings alone cost £500, and under exceptional circumstances must be sold without delay. Forms and all details on application. Tenders will be received up to Friday, June 17, will be opened at 1 o'clock, and the buyer declared at the offices of Mr. G. B. Crocker, Chemist's Valuer, 15 Walbrook, E.C.

PARTNERSHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, PARTNERSHIP.—A Hamburg Merchant, particularly acquainted with the Drug trade and its most lucrative branches, wishes to enter into negotiations for an international establishment in Drugs, Medical Spirits, Chemicals, &c., which will greatly increase by Hamburg's entering into the Union of German Customs next year. Apply to Bruno Johannsen, 27 Ritterstr., Hamburg.

EMPLOYERS WANTING ASSISTANTS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

INVOICE Clerk wanted in London; one accustomed to the work. Apply by letter, stating age, last situation, &c., to W. B., care of Mr. Smith, Corn Merchant, Stratford, E.

IMMEDIATELY.—An experienced Dispenser, accustomed to London business. Apply to Savory & Moore, 143 New Bond Street.

IMMEDIATELY.—A competent Assistant; qualified preferred; state age, height, salary (outdoors), and full particulars. W. D., 11 Bugle Street, Southampton.

OUTDOOR.—An Assistant, about 23, with Minor. Apply, sending carte and full particulars, to T. B. Tyson, Worthing.

ASSISTANT, good Salesman and Prescriber, for a Sea-side Business; abstainer preferred, and one from the country; age about 25. Apply, stating age, height, and salary expected, to J. Hughes, Bognor-on-Sea, Sussex.

LABORATORY.—Wanted, for a small laboratory in Liverpool, a competent Man, capable of undertaking management, and who does not object to work. Apply, "Chemist," 58 Bold Street, Liverpool.

WANTED for 1st June, an Assistant for a Mixed Wholesale and Retail Business; salary, 40%; one seeking a permanency preferred. Anning, 34 Week Street, Maidstone.

ASSISTANT WANTED.—An Assistant (about 22) for a Mixed Country business; with knowledge of postal duties preferred. Carte, references, salary, &c., to McNeil, Chemist, Crewe.

WANTED, at once, an Assistant for Retail and Dispensing; Minor man preferred. Address, with full particulars, to E. Wavell, 23 Stockbridge Terrace, Victoria Street, S.W.

ASSISTANT; Minor qualification; about 23 years of age; of good address and appearance; a neat and accurate Dispenser, and well up in general retail. State age, height, experience, and salary required, to W. Wade, Sidcup, Kent.

WANTED, a man who thoroughly understands making Bone Drainage Tubes for surgical purposes; must be sober, energetic, and be well recommended. Address, "Bone Drains," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMMEDIATELY, an active and pushing Young Man, of good address, pleasant and obliging to customers, up in Prescribing, able to extract teeth; knowledge of French preferred; capable of taking charge if required. State age, height, salary, and reference, enclosing carte (to be returned), C. Griffith, Medical Hall, Canterbury.

WANTED, a Dispenser for a Royal Naval Hospital; candidates must possess either the Major or Minor qualification of the Pharmaceutical Society of Great Britain; age from 20 to 25. Apply to the Director-General of the Medical Department of the Navy, Avenue House, Northumberland Avenue, W.C.

ASSISTANTS WANTING SITUATIONS.

1s. for twelve words; 6d. for every six words beyond.

ASSISTANT (23); part or full time. "Alpha," Royston, Sun Street, Keighley.

JUNIOR or Improver; 5 years' experience; indoors. Bennett, Roper Street, Barrow, Lancashire.

ASSISTANT; would accept nominal salary under senior, where could improve in Dispensing. "Spero," 16 Park Street, Winterton, Doncaster.

TO Dispense or Keep Books for Chemist or Surgeon, after 6 P.M. "Dispenser," 22 Stoneliest Street, Tollymore Park, N.

AT Wet Counter in Wholesale; experienced; disengaged. "Chemicus," 29 Sylvester Road, Mare Street, Hackney.

AS ASSISTANT (to manage branch or otherwise); 12 years' experience; references; in or outdoor; aged 29; good counterman. E., 24 Bianca Street, Bootle.

EXPERIENCED Assistant or Manager of small select business, with view to early succession; nominal salary. A. B., Southall Bros. & Barclay, Birmingham.

LONDON AGENCY.—A pushing man, with City offices, seeks above. Address, X., care of Universal Drug Company, 19 & 21 Queen Victoria Street, E.C.

TO REPRESENT a good Drug, Sundries, &c. firm (part time); reasonable offer entertained; no fancy salary expected. G., care of Butterworth, Wholesale Chemist, Wakefield Road, Bradford.

CLERK.—Scotchman (21); 3 years' Wholesale Chemicals; English, French, and German; salary no object. R. J. N., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR; 4 years' experience; disengaged June 30; well up in Dispensing; good references; passed examination in Botany and Chemistry. L. J., 89 Taff Street, Pontypridd.

TO DRUG STORES OR CHEMISTS.—Wanted, a situation as Manager, where a good-class trade is to be done, by one who has a thorough practical knowledge of the Drug business; the highest references from good houses. Address, "Delta," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AS TRAVELLER.—A Gentleman who has been calling upon Chemists, Confectioners, &c., in North and South Wales, and the North of England, is open to a re-engagement with a good firm of Wholesale Druggists. Address, "Frank," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

APPRENTICESHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

APPRENTICE wanted, indoors; comfortable home; light business, no heavy trade; assistance given with studies; time for recreation and study. Apply, L. Sanger & Sons, Oxford Street, W.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading which can be obtained on application.

AGENTS wanted for "Dr. Birley's Anti-Catarrh" and "Baby's Blessing"; exceptionally favourable terms to special agents. Write to-day for particulars to E. Birley & Co., 1 Cecil Street, Strand, London, W.C.

TO CHEMISTS.—Agents wanted amongst first-class Chemists, one in every town, by Mr. Mark Solomon, Oculist and Optician, 153 Upper Thames Street, City, London; no risks or outlay required; good references required.

BOXES! BOXES!!—Cheap Light Wood Boxes, suitable for Chemists, Confectioners, &c., for sending all kinds of articles through the post; sample and price-list free 6 stamps. Write for sample, giving size you require, to T. Casbon, Box Maker, Peterboro'.

SPECIAL NOTICE.—Four barrels fine St. Vincent Arrowroot, just received, are offered at the following low prices, viz.:—3 lbs. for 1s. 6d.; 6 lbs., 2s. 9d.; 12 lbs., 5s.; 28 lbs., 10s.; parcels sent direct or enclosed through London agent; orders should be accompanied by remittance or London reference. Address, Wilham Pix, 167 St. Thomas Road, Finsbury Park, London.

"NOTES ON DISPENSING," for Pharmaceutical Students by George Stirling. New and enlarged edition. Copious notes on Mixtures, Emulsions, Suppositories, Difficult Pills, and Excipients, with an easy method of Pearl-coating. Interleaved for M.S. notes. Post free 13 stamps.

"DOSES OF NEW B.P."

Compactly arranged for vest pocket. Easily mastered, convenient for reference. Post free 6 stamps, from John Gower, Publisher, 47 Sigdon Road, Hackney, London.

A VALUABLE SPECIAL AGENCY.

DR. BIRLEY'S PREPARATIONS.—Large and Ready Sales.—48 page Pamphlets, gold covers, show-cards, &c. free; write to-day for samples. Gordon Murray & Co., 17 Castle Street, Holborn, London. Sole agents for Great Britain and India. "Baby's Blessing" and "Anti-Catarrh" may also be had.

PRELIMINARY AND MINOR.

ALL STUDENTS who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 32 Pupils passed the last Examinations.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Cæsar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. MINOR.—Equations Simplified 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

DENTISTRY.—Mr. J. W. MARTIN, Manufacturing Dentist to the Profession, 46 Beckenham Road, Penge.—Best material and workmanship guaranteed; terms on application. Instruction given in all branches of surgical and mechanical dentistry; registered gentlemen, who have not had the advantage of a good dental education, are rapidly passed through a full course of instruction, which will enable them to practise dentistry in all its branches, for a fixed and inclusive fee.

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ANALYTICAL, VACUUM, AND BULLION BALANCES.
Wolters' Improved Short-Beamed Analytical Balance,
A SPECIALITY. Assay and other Weights of every Description Made to Order.
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WHOLESALE MANUFACTURER OF
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CORN PLASTERS, MUSTARD PLASTERS, &c., &c.,
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"AN AWFUL MISTAKE"

Is made daily by Chemists retailing rubbishy nostrums, when by a small outlay and utilising a little tact genuine preparations of real medicinal worth might be sold, bearing larger profit, giving more gratifying results, and hence an ever increasing demand. Buy Brooks' reliable Recipes, every one of which is guaranteed. All preparations in actual commerce. "New Remedy for Toothache."—Gives instant ease, simple, safe, and inexpensive. "Occasional Pills" (for Ladies).—Physician's prescription: always produce desired result—preferred to Welch's. "Embrocatio Alb." (like Eiliman's).—Mix white, creamy, inseparable, and cheaply produced. "Ringworm Specific."—Guaranteed safe, and certain cure—one trial will prove. "Corn Cure."—Differs from any advertised formula, pays well cleanly, painless, and rapid. "Rheumatic Embrocation."—Kills pain, and reduce inflammation; costs under 8d. per pint. "Red Rose Lotion" (resembles Sulpholine).—For all skin ailments, sunburn, freckles, redness, &c. The above seven sent as sample for 8s. (special offer); detailed List of 380 Recipes post free anywhere. Recipes 1s. 1d. each, 3 for 2s. 6d., free with full instructions.

T. BROOKS, Chemist, Louth, Lincs.

EXCHANGE COLUMN.

Limited to the Advertisement of Surplus Stock, Formulæ, Addresses Wanted, and Articles Wanted.

FOR DISPOSAL.

Drugs and Chemicals.

Vinum vitæ, 3 dozen 2s. 9d.; perfectly clean; half-price. Brampton, Sudbury, Suffolk.
Super essence of lemon, very fine quality, own importation; two coppers, or less quantity, at a low figure. Arblaster, Chemist and Soda Water Manufacturer, New Street, Birmingham.
Four quarts, eight half-gallons, Wilson Kitchen's sheep dip; seven 2s. 9d., two 5s. 6d. Long's dip; five 1s., four 2s. Long's maggot lotion; nine 1s. Holden's hand and foot powder; eight 1s. ground leaf tobacco; half retail prices; dozen Hooper's pills, soiled, 7s. 6d. Young, Pontefract.

Literature.

"Chemist and Druggist Diaries" for '85, '86, and '87. Cavell, Chemist, Whittlesea.
Hume's "History of England," cost 4l. 15s.; Foster's "Dentistry"; Fowne's "Inorg. and Organ. Chemistry"; cheap. Vaughan-cum, 63 Redcliff Hill, Bristol.
Price, 8 Foregate Street, Worcester, offers "Wills' Pharmacy" and "Materia Medica," with coloured plates, cost 6s. 6d. and 10s. 6d.; will sell for 4s. and 5s. 6d., both new.

Shop Fittings.

2 plate-glass facias, named "Read," black letters on gold ground, each 4 ft. by 10 in., in oak frames, above good as new, and handsome; 4 2-gallon window carboys, and 5 1-gallon; what offers in cash? Mr. Wright; Chemist, Hadleigh, Suffolk.
Glass Bottles.—Job lines.—About 6 gross each 3-oz. opal and turquoise blue pomades, screw nickel-capped, 18s. per gross; 10 gross 4-oz. ditto, 20s.; 14 gross 2-oz. white flint pomades, screw nickel-capped, 13s.; 4 gross 4-oz. eau de Cologne, 10s.; 20 gross stoppered smelling salts, same shape as Godfrey's, 24s.; 10 gross each 1, 2, and 3-oz. turquoise covered pots, 16s., 20s., and 25s. per gross respectively; all best quality; sample of either kind post free 4 stamps, or of each line 18 stamps. Address, Hearn, 381-3 Kingsland Road, London.

Formulæ.

Send for my list of recipes, cheap and reliable. "Chemist," Edwards, Wye.

200 reliable recipes for preparations in everyday use. The latest addition is "Lanoline Toilet Cream," a delightful preparation from the new material "Lanoline;" must find a ready and profitable sale with every chemist as a novelty. Single recipes, 1s. 1d. each; three for 2s. 6d. Complete list posted on receipt of address. 63/45.

Extraordinary Offer!—For half-crown Postal Order or stamps, following recipes post free (as sample):—"Herbalade," a concentrated compound botanic extract (like Mason's), for making aromatic herb beer, at 4d. gallon, delicious, appetizing, sparkling; "Tic Specific," infallible tincture, acts like magic, quicker than tonga; "Hop Tonic" (instant), splendid preparation in every respect, costs under 1s. 1b.; "Spring Blossom," most lovely and enchanting perfume (resembles Gosnell's), adapted for Jubilee or local name; detailed list free. T. Brooks, Chemist, Louth.

Miscellaneous.

Bigg's sheep dip, in good condition; what offers? Ombler, Chemist, Market Weighton.
Pill-machine, 24. 4-gr; price 12s. 6d. Griffith, Medical Hall, Canterbury.
Rubber stamp ink manufacturer's form, splendid six stamps, genuine. Francis, Chemist, Peckham.
Large casks for sale, suitable for water butts, tanks, &c., cheap. "Ozone," Cale Street Distillery, Chelsea, S.W.
4 50-gallon circular tinned iron oil-cisterns, with taps; sound condition. Particulars, Cuttle, Scarborough.
100 l. shares in the Hop Bitters Company, paying 10 per cent.; what offers in cash? H., care of Thornburn & Son, Chemists, Bishops Auckland.
For sale.—Stock and fixtures of private surgery, in good condition; bargain for chemist, commencing business. Address, J. G., 52 Camden Square, N.W.
Good sound beer-barrels, suitable for oils or vinegar: 6 12-gallon, 2s. each; 4 18-gallon, 3s. each; 2 26-gallon, 5s. each; 1 cwt. powdered drop black and cask, 7s. Kemp, Horncastle.
3 Nautilus swimming belts, 5s. each; "Enterprise" tincture press, 9s.; 5-gr. pill machine, 10s.; quart tincture press, 10s.; pair 26 in. specie jars; 3 hand-mirror stands, 2s. 6d. each; or exchange saleable patents. W. B. Smith, Gosport.

Surplus Stock.—Mahogany counter-case, 52½ in. by 24 in. extreme, bent plate lifting flaps sloping and flat shelves, 6d.; plate-glass facia, embossed "Pharmaceutical Chemist," 146½ in. by 14 in., 3l. 10s.; 3 15-in. marble mortars 15s. each; pestles, 2s. 6d. to 5s.

Second-hand Glass, &c.—Specie jars: 1 scroll label, glass cover, 31 in. high, 35s.; pair ditto, 23 in. high, glass gilt covers, and 2-in. mahogany stands, 3l. 10s. Carboys: 1, 16-gal. cut stopper, 40s.; 1, 12-gal. ditto, 30s.; 2, 9-gal., plain stoppers and bulb ebonized stands, 60s.; 3, 4-gal., and stands, 37s. 6d.; 1, 3-gal., 5s.; 3, 1-gal., 7s. 6d.; 1 ditto, flat front, 5d. Cylinders: 1-gal., 2s. 6d.; 2-gal., 8s. 6d.; 3-gal., 5s. 4 scrolls, flat covers, 30s.; 1 gross rounds, washed, no labels; 20 1-gallon blacks ditto, new caps and bungs; 21 doz. bottles, jars, yellow paper labels, and contents for a surgery, 9l. 7s. 6d.; 24 green carboys, stoppered, japanned caps and labels; several lots ointment and extract pots. Remittances with orders. Hawke & Son, Wild Court, Great Wild Street, London, W.C.

WANTED.

To purchase a range of mahogany drawers, 11 ft. long. H. Lunn, Horncastle.
"American Druggists' Circular," complete, for 1886; state price and condition. 255/40.
Empty Apollinaris or similar bottles wanted. Apply by letter, with price, to Edisbury & Co., North Wales Factory, Wrexham.
Mahogany drug-fitting, 14 ft. lockers, drawers, shelving, and cornice complete. State price and condition to W. Farnsworth, South Normanton, Alfreton.
Books used in studying for Preliminary examination; suppository mould; "Beasley's Receipts"; dispensing scales; wall-case, 5 or 6 ft. high by 3 ft. 9 in.; dispensing screen length 6½ ft. Judge, Chemist, Long Eaton.
Complete copies of *The Chemist and Druggist* for March and May, 1863; September, October, November, December, and index and title-page, 1870; also March 6 and 13, 1886, 11/87.

Address Wanted.

Address of J. E. Beesley & Co., late of 17 Redcross Street, London, S.E. Proprietors of Liebig's iodized cod-liver oil. 8/87.